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ABSTRACT

This book summarizes approximately 600 reports of reading research identified between July 1, 1992 and June 30, 1993. Research studies in the book are categorized into six major areas: (1) summaries of reading research; (2) teacher preparation and practice; (3) sociology of reading; (4) physiology and psychology of reading; (5) the teaching of reading; and (6) reading of atypical learners. All but the first category in the book are further subcategorized, and individual studies within subcategories are grouped by subject. An author index and a list of journals, conference proceedings, and journals monitored conclude the book. (RS)

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Annual Summary of Investigations Relating to Reading

July 1, 1992 to
June 30, 1993

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Annual Summary of Investigations Relating to Reading

July 1, 1992 to June 30, 1993

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Abbreviations

Abbreviations have been used with certain terms and test names that appear frequently in reading research reports.

TERMS

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
CA	Chronological Age
CAI	Computer Assisted Instruction
CRT	Cathode Ray Tube
DRA	Directed Reading Activity
DRTA	Directed Reading-Thinking Activity
EH	Emotionally Handicapped
EMR	Educable Mentally Retarded
ESL	English as a Second Language
GPA	Grade Point Average
IQ	Intelligence Quotient
L1	First Language
L2	Second Language
LD	Learning Disabled
LVF	Left Visual Field
MA	Mental Age
MANOVA	Multivariate Analysis of Variance
RA	Reading Age
RD	Reading Disabled
RT	Reaction Time
RVF	Right Visual Field
SES	Socioeconomic Status
VF	Visual Field

TESTS

ACT	American College Test
CAT	California Achievement Test
CTBS	Comprehensive Tests of Basic Skills
DRP	Degrees of Reading Power
GMRT	Gates-MacGinitie Reading Tests
GORT	Gray Oral Reading Test
IRI	Informal Reading Inventory
ITBS	Iowa Test of Basic Skills
ITPA	Illinois Test of Psycholinguistic Abilities
MAT	Metropolitan Achievement Tests
MRT	Metropolitan Readiness Test
NARA	Neale Analysis of Reading Abilities
NDRT	Nelson-Denny Reading Test
PIAT	Peabody Individual Achievement Test
PMAT	Primary Mental Abilities Test
PPVT	Peabody Picture Vocabulary Test
RMI	Reading Miscue Inventory
RPM	Raven's Progressive Matrices
SAT	Stanford Achievement Tests

Schonell	Schonell Graded Word Reading Test
SDRT	Stanford Diagnostic Reading Test
SIT	Slosson Intelligence Test
Spache DRS	Spache Diagnostic Reading Scales
SRA	SRA Achievement Series
TORC	Test of Reading Comprehension
WAIS-R	Wechsler Adult Intelligence Scale – Revised
WISC-R	Wechsler Intelligence Scale for Children – Revised
WJPEB	Woodcock-Johnson Psycho-Educational Battery
WPPSI	Wechsler Preschool and Primary Scale of Intelligence
WRAT	Wide Range Achievement Test
WRMT	Woodcock Reading Mastery Test

A microfiche edition of this *Annual Summary of Investigations Relating to Reading* is available. Annotated citations are provided in author and subject sequences on eye-readable, 4 x 6 cards; the full-text documents are reproduced on 4 x 6 high-quality microfiche which utilizes an exclusive image indexer. Printed author and subject indexes are included, and a demonstration workshop is available to train staff and students in the use of the collection. For further information about the microfiche edition of the *Annual Summary* or any previous *Summary*, contact the Alvina Treut Burrows Institute, PO Box 49, Manhasset, NY 11030, USA. Phone 516-869-8457.

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Annual Summary of Investigations Relating to Reading

*July 1, 1992 to June 30, 1993**

SUMMARIZES reports of reading research identified between July 1, 1992, and June 30, 1993. The research studies are categorized into six major areas, five of which have been further subcategorized. As in previous years, the majority of studies reported were classified into the Physiology and Psychology of Reading area. The largest subdivisions within that category continue to be Comprehension Research and Factors Related to Reading Disability. The largest subcategory in the Sociology of Reading is concerned with the content analysis of printed materials. A listing of other general bibliographies of reading research appears as the first major category of the present summary.

Order of Studies Within Subcategories

STUDIES in the Annual Summary are subcategorized under five of the six major categories (Category 1 consists of general reviews only and is not subcategorized). Within any one subcategory will appear a number of loosely related studies. While all the research within one category falls under the same general rubric, the studies will vary markedly in emphasis, in the question being addressed, and/or in the focus. Thus, studies have been grouped within subcategories also. For example, under Factors Related to Reading Disability, those studies that address dyslexia appear together, while those that deal with strategies used by good and by poor readers would be placed in juxtaposition. The reader looking for research on one particular aspect of reading disabilities would then find them all in one spot rather than dispersed haphazardly throughout the subcategory as might be the case if they were listed alphabetically by author.

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*Materials for inclusion were identified by Douglas Rogers, a former doctoral student at SUNY at Buffalo, and by Reongrudee Naranunn, a current doctoral student in the Reading Program. Ray Hertel, our dependable and conscientious work-study student, is due a note of thanks. This issue of the summary is dedicated to Margaret Collins who served so ably as my secretary for 12 years. In addition, I am deeply indebted to Eunice Garey who came to my rescue and has picked up the work where Margaret left off. Without both of these people, the summary could never have been completed. One more note of thanks is due to the staff at IRA Headquarters who bailed me out during the period when I had no work-study or secretarial help.

I. Summaries of reading research

LARSON, RICHARD L., & BECHAN, ANN. (1992, December). Annotated bibliography of research in the teaching of English. *Research in the Teaching of English, 26*, 446–465.

Presents annotations of research in the teaching of English under six major categories: curriculum, language, literature, researcher education, teacher education, and writing. Published research studies felt to be of greatest interest have longer annotations and are grouped together at the beginning of each category. Other items judged worthy of mention follow. Several of the major categories are further subdivided. The bibliography includes published articles and books as well as dissertation abstracts and ERIC documents. Citation information includes ERIC document numbers and University Microfilm numbers.

LARSON, RICHARD L., & SAKS, A.L. (1993, May). Annotated bibliography of research in the teaching of English. *Research in the Teaching of English, 27*, 200–214.

Cites and annotates research in the teaching of English under six major categories. The items included are selected, in general, from articles and books published from July to December preceding the appearance of the bibliography. Longer annotations are given for articles considered to be of more than usual interest. Several of the major categories are subdivided.

WEINTRAUB, SAM; SMITH, HELEN K.; ROSER, NANCY L.; MOORE, WALTER, J.; JONGSMA, KATHLEEN S.; DOYLE, MARY ANNE E.; CEPRANO, MARIA A.; & TRUSCOTT, DIANE M. GRAHAM. (1993). In Sam Weintraub (Ed.), *Annual summary of investigations relating to reading, July 1, 1991, to June 30, 1992*. Newark, DE: International Reading Association.

Abstracts and categorizes approximately 600 reports of research identified in the period from July 1, 1991, to June 30, 1992. The research is categorized under six major areas, five of which are further subcategorized. Major categories include summaries of reading research, teacher preparation and practice, sociology of reading, physiology and psychology of reading, teaching of reading, and reading of atypical learners.

II. Teacher preparation and practice

II-1 Behavior, performance, knowledge, practices, effectiveness

THOMPSON, RICHARD A., & WARREN, BONNIE Z. (1993, Spring). Reading professors cite reading competencies expected of classroom reading teachers. *Journal of Reading Education, 18*, 31–44.

Reports results of a survey designed to determine the competencies that reading professors and consultants expect classroom reading teachers to possess. Sixty-two randomly selected members of the Organization of Teacher Educators in Reading responded to a set of competencies derived from both the professional literature and the researchers' instructional experiences. A 5-point scale ranging from *strongly agree* to *strongly disagree* was used to present categories of competencies related to what classroom teachers of reading need to know and conceptualize and related to their abilities to teach and assess. Results showed that respondents strongly agreed with the identified competency categories. Only one item, concerning historical knowledge of the development of the English language, received a majority of responses in the neutral or disagree categories.

HAMMAN, VINCENT E. (1992, Fall). Teachers' awareness of reading terms. *Reading Improvement, 29*, 174–178.

Reports results from a survey of 211 randomly selected elementary classroom teachers from South Dakota to gauge their familiarity with 30 terms associated with whole language or basal reading instruction. Teachers indicated their familiarity with terminology on a 3-point scale, which included "aware [of term]," "minimal awareness," and "no awareness." The questionnaire further asked respondents to indicate the sources of their awareness of individual terms, such as professional organizations, staff or inservice meetings, college courses, books, professional journals, colleagues, or other. Three forms of the questionnaire with items randomly ordered were distributed. Results indicated that elementary classroom teachers were more aware of basal reading than whole language terms. The 13 terms that received the highest percentage of awareness from respondents were considered basal reading terms (for example, *letter recognition, long vowel sounds*, and *short vowel sounds*). University or college courses were the most frequently reported sources of awareness for each of the 30 survey terms.

HUGHES, JULIE A., & WEDMAN, JUDY M. (1992, Summer). An examination of elementary teachers' espoused theories and reading instruction practices. *Reading Improvement, 29*, 94–100.

Reports data from interviews with 25 elementary teachers to examine their teaching theories and classroom practices. Interview questions explored subjects' beliefs about teaching reading, practices for diagnosis, and classroom actions after completing diagnoses. Subjects were women ranging in age and teaching experience and enrolled in a graduate class in elementary curriculum at a Midwestern university. Interviews were transcribed for analysis using pre-established categories. The majority of participants ascribed to process rather than content or motivation theories. However, responses appeared to be based on teachers' assumptions rather than on their espoused theories. Four diagnosis-action patterns were revealed in the investigation: 54% of the participants reported an assume-persist pattern; 42% an assume-retreat pattern, 2% an inquire-retreat pattern, and 2% an inquire-persist pattern. Participants who espoused process and motivation theories generally chose assume and persist patterns, while those espousing content theories were more likely to retreat after making diagnostic assumptions.

ARCHER, PETER, & O'ROURKE, BERNARD. (1988, Summer/Winter). Relationships between school-organization factors and reading instruction among teachers of 4- to 7-year-olds. *The Irish Journal of Education, 32*, 53–65.

Uses data from a previous survey of teachers of infant and first classes in primary schools in the Republic of Ireland in an attempt to explain the discrepancy between teachers' preferred and actual practices in teaching reading. In particular, the relation between school-organization factors and various aspects of the teaching of reading were examined. The analysis was based on completed questionnaires from 581 teachers in 245 schools. A series of stepwise regression analyses yielded results indicating that the school-organization variables accounted for a statistically significant but relatively small proportion of variance in 8 out of the 10 aspects of reading instruction examined.

Hoffman, James V.; Roser, Nancy L.; & Battle, Jennifer. (1993, March). Reading aloud in classrooms: From the modal toward a "model." *The Reading Teacher, 46*, 496–503.

Presents results of a questionnaire designed to determine the frequency and regularity with which elementary classroom teachers read aloud, the choice and organization of literature being shared, and the provision of opportunities for discussion and other forms of response. A 17-item questionnaire was directed to 54 major institutions with teacher-education programs. Preservice teachers who were involved in field experiences were asked to complete the survey based on their most recent visit to an elementary classroom. The completed surveys represented 24 states and 537 classrooms from kindergarten to Grade 6. On average, 74% of observers reported that teachers read aloud to their students; the percentage was only slightly higher for kindergarten and primary grades (76%) than for intermediate grades (69%). No discernible patterns were found in the frequency of read-alouds as a function of school size, community characteristics, or student ethnicity. The most frequent read-aloud time ranged from 10 to 20 minutes; reading aloud took less than 20 minutes in 88% of the cases. Discussions of story most frequently occurred for less than 5 minutes. Only 3% of the teachers spent 20 minutes or more discussing the story. The two most common forms of response opportunities were writing (36%) and drawing (36%). A total of 127 authors and 217 titles were read aloud. These data are compared with findings from research literature suggesting characteristics of effective read-aloud programs.

Martinez, Miriam G., & Teale, William H. (1993, May). Teacher storybook reading style: A comparison of six teachers. *Research in the Teaching of English, 27*, 175–179.

Investigates the consistency of storybook reading styles for six kindergarten teachers as they read the same four storybooks to children. Conversational moves of the teacher and students were examined in relation to the literature read. Three of the teachers were audiotaped, and three were audio- and videotaped over a 4-week period, with researchers noting nonverbal participant behaviors during reading. Tapes were transcribed, and visual information and notes provided additional details about gestures and facial expressions. Data were classified by topic unit, which consisted of all contiguous talk contributed by the teacher and children directed toward the same aspect of a story feature or story-related feature. Researchers examined three aspects of teacher storybook reading style: (1) focus of teacher talk, (2) type of information talked about, and (3) instructional strategies used. Data suggested that each kindergarten teacher had a distinctive storybook reading style and that a teacher's style tended to be relatively consistent across the four read-alouds.

King, Yvonne M., (1992, Winter). Teaching approaches and critical thinking: How do they interact in the classroom? *The Reading Instruction Journal, 35*, 9–15.

Examines how often and in what ways four elementary teachers encouraged the use of critical thinking skills with their pupils. The teachers (whose experience ranged from 3 to 18 years) responded to a questionnaire in which they described their instructional materials and general format for teaching reading. The researcher then observed two language arts classes and one content area lesson over a 2-week period to identify specific teaching characteristics and each teacher's instructional mode. Teacher characteristics dealt with teaching strategies, dialogue, and types of questions. The second factor, instructional mode, associated the teacher with a descriptive teaching style. Based on observations, each teacher was assigned to the expository mode, inquiry mode, demonstrative mode, or integrated curriculum mode. Data indicated that education and experience did not seem consistently influential in determining how well these teachers included critical thinking in their lessons. However, specific teaching characteristics showed a relation with promotion of critical thinking. Teachers who consistently used higher level questioning and who incorporated various thinking strategies appeared to be aware of the importance of children's developing an understanding of their own thought processes. Teachers who used the inquiry or integrated mode also generated pupil answers that reflected higher critical thinking. Less structured materials also tended to allow more flexibility with both dialogue and varied questions.

YOUNG, TERRELL A., & DAINES, DELVA. (1992, October–December). Students' predictive questions and teachers' prequestions about expository text in grades K-5. *Reading Psychology, 13*, 291–308.

Compares the cognitive levels of questions asked by pupils and teachers prior to reading or when listening to expository text. Sixty pupils were selected randomly from kindergarten through fifth grade and were asked individually to generate questions that might be answered by a nonfiction text. Twelve teachers also generated questions intended to guide the children's understanding. All questions were analyzed using literal, interpretive, and applied levels of comprehension. Chi-square analysis indicated significant differences between pupils' and teachers' questions. Children, regardless of grade level, asked more interpretive questions than either literal or applied. By contrast, their teachers asked more literal-level questions about the same text. The hypothesis that children's questions will become more like teachers' as they progress through the grades was rejected.

SCHUMM, JEANNE SHAY; VAUGHN, SHARON; & SAUMELL, LINDA. (1992). What teachers do when the textbook is tough: Students speak out. *Journal of Reading Behavior, 24*, 481–503.

Examines middle school and high school students' views of instructional practices teachers may use to facilitate reading in difficult textbooks. The Student Textbook Adaptation Evaluation Instrument (STAEI) was completed by 776 middle school and 1,043 high school students. Each student rated 33 textbook adaptations listed on the STAEI, noting his or her preference and perceptions of teacher use of the adaptations. A secondary purpose of the study was to compare responses on the STAEI among lower and higher achieving students. To address this purpose, a subset of the initial cohort of students (120 lower achieving and 120 higher achieving) was selected. Results indicated a difference between students' perceptions of the desirability of textbook adaptations (high) and their perceptions of the frequency of use of the adaptations in the classroom (low). Students' responses to items and their comments indicated that they did not feel they were being exposed to the types of instructional adaptations they needed. This was particularly true among high school students and higher achieving students.

SOSNIAK, LAUREN A., & STODOLSKY, SUSAN S. (1993, January). Teachers and textbooks: Materials use in four fourth-grade classrooms. *The Elementary School Journal, 93*, 249–275.

Investigates the roles textbooks play in elementary education and how they come to play those roles. Four 4th-grade teachers in two urban schools were observed and interviewed to obtain data related to (1) how often and in what ways the teachers used textbooks and other materials in teaching languages arts, (2) what the teachers thought about textbooks and their uses across subjects, and (3) how teachers' views about textbooks fit in the larger body of influences (for example, testing programs and district guidelines). Data included weeklong classroom observations conducted at two points during the academic year, semistructured and tape-recorded interviews, and content analyses of the materials used in the four classrooms. Findings indicated that (1) the influence of textbooks on classroom instruction and teachers' thinking was somewhat less than research literature indicates, (2) patterns of textbook use and thinking about materials were not necessarily consistent across subjects, even for a single teacher, and (3) the conditions of elementary teachers' work encouraged selective and variable use of textbook materials.

SIMMONDS, EFFIE P.M. (1992). The effects of teacher training and implementation of two methods for improving the comprehension skills of students with learning disabilities. *Learning Disabilities Research & Practice, 7*, 194–198.

Addresses the effectiveness of teacher acquisition and implementation of two methods for improving the comprehension skills of students with learning disabilities. Subjects were 24 special education resource room teachers who were randomly assigned to one of two training conditions: (1) instruction in teaching specific questioning strategies (Question-Answer Relationships [QARS]), or (2) instruction in traditional methods of reading comprehension instruction (including asking literal-level questions and requiring supporting details). After the teacher training, small groups of students from grades 1–9 were taught with one of the methods. Pre- and postassessments were completed through the use of two forms of a reading comprehension inventory as well as maze passages that were prepared from students' social studies curricula. Results of ANCOVAS, with pretreatment scores covaried, indicated that teachers acquire and implement both QAR and traditional comprehension instruction (skills) effectively. On both the reading comprehension and maze tasks, however, the QAR group performed significantly better than the group applying traditional reading comprehension instruction. QARS significantly elevated the question-recognition and answer-location performance of students with learning disabilities.

KELLAGHAN, THOMAS, & FONTES, PATRICIA. (1989, Summer/Winter). Relative bias in teacher judgments and standardized tests in the identification of literacy problems. *The Irish Journal of Education, 25*, 40–50.

Compares classroom teachers' identification of pupils with literacy problems to pupils' performance on a standardized reading instrument. A total of 83 sixth grade teachers in Ireland completed literacy questionnaires asking them to identify pupils who would have difficulty in everyday reading and writing tasks and pupils who would not be able to cope with reading and writing demands in a postprimary school. In addition, children were given the Drumcondra English Test, Level III, and teachers rated them on a 5-point scale for 12 personal and social characteristics. Of the 2,762 pupils, 303 were rated by teachers as having at least one problem with literacy. On the Drumcondra, an arbitrary cut-off score was selected to include 11% of the pupils (274) who fell below the score. There were 108 pupils identified by both the test and the teacher, 102 by the teacher only, and 107 by the test only. MANOVA procedures were used to compare the three groups in terms of age, sex, social class, classroom behavior, and social behavior. Pupils in the groups identified by both teacher and test were found to have relatively low achievement-oriented behavior. Pupils identified by test only tended to score low in sociability; pupils identified by teacher only demonstrated the least relative bias on the assessed characteristics.

ROWELL, C. GLENNON; ALEXANDER, J. ESTILL; & KOLKER, BRENDA. (1993, Spring). Whole language practices: What's happening in the classroom? *Journal of Reading Education, 18*, 53–64.

Investigates the frequency with which elementary teachers use practices associated with the whole language movement. Participants were drawn from a randomly selected sample of teacher members of the International Reading Association. They were asked to respond to a 30-item survey in which they indicated the regularity with which they employed particular instructional practices extracted from the current literature in the whole language movement. Useful data were obtained from 1,636 teachers (69% of the sample). The most practiced strategy across grades was reading to students, with 91% of the respondents reporting they read frequently. Other frequently used practices included providing time for independent reading and writing (78%), encouraging activities that accept invented spelling in independent writing (72%), and establishing time for silent reading (71%). When data were analyzed for intermediate versus primary students, results indicated that primary teachers employed the strategies associated with whole language more consistently than did intermediate teachers.

SMITH, PATRICIA K.; RINEHART, STEVEN D.; & THOMAS, KAREN F., (1991). Whole language and changing language arts instruction: A national survey. In Timothy V. Rasinski; Nancy D. Padak; & John Logan (Eds.), *Reading is knowledge: The yearbook of the College Reading Association* (Vol. XIII, pp. 139–145). Pittsburg, KS: College Reading Association.

Surveys elementary teachers to (1) determine if and how whole language (WL) is being implemented in schools, (2) investigate the teachers' knowledge of WL, and (3) elicit their reactions toward WL. An average of 10 schools (K–5 or K–6) per U.S. state (a total of 491 schools) responded to the three-page survey. Of the respondents, 70% were females with 1–41 years of teaching experience. The majority of teachers (94%) reported being involved in establishing initial WL programs, with 75% indicating changes are still needed in their current programs. Of those who reported that WL had not been implemented in their school, pilot programs were being planned (53%) or were currently underway (47%). Inservice programs, reported by 90% of the teachers, focused on WL strategies, activities, and classroom management techniques. Ninety percent of WL teachers reported that listening, oral expression, writing, spelling, handwriting, grammar, punctuation and capitalization, and functional, recreational reading were emphasized in their programs. While all the teachers believed writing to be the most important component of WL, reading was viewed as a separate subject taught primarily with basal programs.

SMITH, PATRICIA K. (1992). Are teachers using whole language to teach reading? In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 33–40). Athens, GA: American Reading Forum.

Surveys classroom teachers to ascertain the use of whole language in classrooms across the United States. Ten elementary schools in each of the 50 states were randomly selected to serve as a sample pool. One teacher from each school was asked to respond to the survey; a total of 491 questionnaires (98%) were returned. Teaching experience of respondents ranged from 1 to 37 years. Most schools were located in rural areas (40%), followed by suburban (32%) and urban (23%) settings. Twenty-nine percent of the teachers (from 46 states) reported some degree of whole language instruction in their school. Most of these schools were located in suburban areas with class sizes of 11–20 children. Most of the teachers (71%) reported using traditional approaches to reading, either basal or a combination approach. All locations showed an increase in the length of program implementation, with suburban areas growing the fastest and rural settings the slowest. Over half of the reports stressed that revisions were still needed to improve instruction. There was a general perception by teachers that many still lacked an awareness and understanding of the whole language process.

SAMWAY, KATHERINE DAVIES, & PEASE-ALVAREZ, LUCINDA. (1993). Being a whole language teacher in the United States. In David Wray (Ed.), *Literacy: Text and context* (pp. 181–187). Cheshire, England: United Kingdom Reading Association.

Assesses trends in how whole language (WL) is understood and implemented by those who consider themselves WL teachers and identifies ways to support WL teachers. Northern California served as the sample site. Forty-seven teachers from 20 schools in seven school districts were asked open-ended questions. Most of the teachers had been teaching for at least 5 years. Three of the 20 schools were designated as WL sites. Responses indicated that very few teachers had been introduced to WL through preservice education but, instead, learned WL from other practicing teachers. Teachers' definitions of whole language fell into three categories: (1) an instructional program, (2) a cluster of teaching methods, or (3) a curricular innovation. Several suggestions were given for enhancing professional development in WL, including more time to develop and reflect on the approach, increased availability of support materials such as journals and books, and opportunities for long-term staff development that includes peer coaching. Implications for teacher education are discussed.

WALMSLEY, SEAN A. (1992, November). Reflections on the state of elementary literature instruction. *Language Arts, 69*, 508–514.

Reviews results of two studies focusing on the use of children's literature in the elementary language arts curriculum. The first study reports results of interviews conducted with 74 New York school personnel (46 classroom teachers, 15 remedial and special education specialists, 5 school librarians, and 8 administrators) who offered their views on the role and purposes of literature in the curriculum. Participants were asked to discuss the kinds of books they read to and with children, how they teach literature, and how they meet individual needs within the literature program. Neither teachers, supervisors, nor administrators appeared to have an instructional philosophy for teaching literature or a well-developed scheme for integrating it within the curriculum. The researchers concluded that elementary literature programs comprise a set of routines rather then a coherent, articulated district philosophy. Further, the researchers noted that exposure to literature differs across good and poor readers. In a second study, the literary experiences of eight 2nd graders (equally balanced between better and poorer readers) from two classrooms were tracked across a year. The researcher recorded literary experiences with books in school and at home and categorized the books by genre. One of the classrooms used trade books for the language arts program; the other combined a basal reading program with trade books. Findings indicated that the differences between better and poorer readers were less pronounced in a literature-rich classroom. Children's literature experiences in both classrooms were extensive and broadly reflective of literary genres.

SCHARER, PATRICIA L. (1992, December). Teachers in transition: An exploration of changes in teachers and classrooms during implementation of literature-based reading instruction. *Research in the Teaching of English, 26*, 408–445.

Examines and documents changes across five teachers (of grades 1, 3, 5, and 6 and one learning disability class) over a 9-month period during their transition from basal reading programs to reading instruction based wholly on literature in trade books. Data sources included interviews, group discussions, and classroom observations. Teachers were supported during implementation by interactions with colleagues, inservice sessions, conferences, readings, and the researchers' involvement. Teachers reported problems such as a limited knowledge of literature and reading, a limited repertoire of organizational strategies, and difficulties documenting pupil progress in a manner that would inform grading decisions and instructional planning. In four classrooms, documented changes included a decrease in the use of basals and an increase in the use of trade books through read-aloud sessions, sustained silent reading, small- and large-group book discussions, and thematic planning. There were also increases in pupil selection of books, literature-inspired group projects, and the use of informal assessments such as running records, teacher-child conferences, observations, and portfolios.

SHELLEY, ENA GOODRICH. (1993, Spring). Where do I begin? Creating a classroom that is BOTH developmentally appropriate and whole language based. *Indiana Reading Quarterly, 25*, 16–25.

Reports a study in which the kindergarten and first grade teachers in one school answered questionnaires about their beliefs and philosophies. The questions were related to how teachers believed that young children learn, definitions of whole language classrooms, and the teachers' role in the development and implementation of curriculum. After the questionnaires had been administered, unannounced observations were made in the classrooms to determine if the teachers followed their beliefs and assumptions. The author reports that the teachers practiced their stated beliefs and that the classroom environment was both stimulating and happy, with children interacting and communicating with one another. The environment was termed *print rich* and fostered the development of a positive self-image in the pupils. Children imitated the teachers' behaviors in interacting with one another.

II-2 Beliefs/attitudes toward reading

DAISEY, PEGGY, & SHROYER, M. GAIL. (1993, May). Perceptions and attitudes of content and methods instructors toward a required reading course. *Journal of Reading, 36*, 624–629.

Reports the results of interviews with 40 university faculty members to determine why preservice teachers within their area of specialization might have a negative attitude toward taking a required content area reading course. Interviews were completed with 21 instructors who had content specializations, 15 instructors of methods classes, and 4 instructors who taught both content and methods to preservice teachers. A total of 68% of the respondents mentioned that students do not see the rationale for a content reading course, which suggests that incorporating reading and writing into content area instruction may represent a shift in thinking about teaching that preservice teachers may not have adopted. Thirty percent of the respondents indicated that instructors may not communicate across content and process. The third most prevalent explanation (28%) was that students are not readers or writers themselves. In decreasing order, respondents also mentioned that the students' focus is on their content field rather than on literacy (25%); that students perceive the course as remedial (20%); that students have heard negative rumors about the classes (18%); and that students perceive a conflict in learning styles required across different subject fields (13%). Content and methods instructors differed in their views in that three times as many content instructors suggested that students are not readers or writers themselves.

SCHEFFLER, ANTHONY J.; RICHMOND, MARK; KAZELSKIS, RICHARD. (1993, January-March). Examining shifts in teachers' theoretical orientations to reading. *Reading Psychology, 14*, 1–13.

Examines the direction, durability, and dynamics of shifts in teachers' theoretical orientations to reading. Fifty-five Mississippi Gulf Coast elementary teachers who attended 2-day whole language workshops completed a premeasure, postmeasure, and delayed postmeasure (after 5 weeks) using the Theoretical Orientation to Reading Profile (TORP). The TORP is a 28-item Likert scale that places the respondent along a numeric continuum representative of phonics, skills, or whole language orientations to reading. Four groups-by-trials procedures were used to analyze the total orientation score and three subscale scores. In all cases, the postmeasure and delayed postmeasure means were significantly greater than the premeasure means. No significant difference was indicated between the postmeasure and delayed postmeasure means for the phonic and skills subscales. Initial orientations had no

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impact on the direction or durability of the shifts in orientation. As a group, subjects in the study moved significantly closer to a whole language orientation from pre- to postmeasure and retained this position from the premeasure to the delayed postmeasure. The results suggest that a shift in orientation was affected by and was in a direction consistent with the treatment emphasis. There was, however, significant regression toward the premeasure position from the postmeasure to the delayed postmeasure, suggesting a deterioration of affected shifts in theoretical orientation to reading.

LONBERGER, ROSEMARY B. (1992). The belief systems and instructional choices of preservice teachers. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 71–78). Provo, UT: College Reading Association.

Explores preservice teachers' beliefs about reading and instructional practices prior to, during, and after participation in a reading methods course. Subjects in the study were 37 elementary and special education majors who were enrolled in an introductory reading methods course. The course was designed to familiarize students with three reading models and their instructional implications. Students' belief systems were assessed through their written responses to three informal questions on the first and last day of class. Students' orientations were categorized and compared to observations of lessons toward the end of the course. Results indicate that prior to course participation, the majority of students defined reading as an interactive process, although a bottom-up orientation was used to characterize beginning reading. Pre–post comparisons showed stability for interactive definitions, with top-down orientations almost doubling and bottom-up definitions nonexistent. Variation within categories was found. By the end of the course, the majority of students (84%) were able to make instructional choices that were more consistent with their developed beliefs.

MOSS, BARBARA. (1992). Preservice teachers' reminiscences of positive and negative reading experiences: A qualitative study. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 29–35). Provo, UT: College Reading Association.

Reports on the contributions of school-based experiences to the evolving views of preservice teachers. Subjects were 150 third- and fourth-year undergraduate elementary education majors, ages 19–20, who were enrolled in a reading methods course. Students were asked to describe and reflect on a specific positive and negative incident that influenced their views of reading. Incidents were sorted and analyzed by categories. The most frequently mentioned negative experience pertained to reading aloud in class, usually as part of round-robin exercises. Other experiences perceived as negative included required readings, book reports, and classroom reading laboratory kits. The most frequently reported positive reading experience was listening to books read aloud daily by the teacher. Other positive memories included participating in book extension activities. Results are compared to those found in an earlier study.

SCARPIGNATO, ANTHONY J., & BRUNNER, JOSEPH F. (1992, Winter). How do elementary school teachers value certain pre-reading strategies? A recent survey. *The Reading Instruction Journal, 35*, 5–8.

Seeks to determine and analyze the belief systems held by a group of elementary teachers regarding prereading strategies, to interpret the teachers' beliefs with particular reference to the validity of those strategies, and to plan district inservice training based on the results. Four prereading strategies were derived from the literature and verified by graduate students in reading education, as follows: (1) eliciting background knowledge, (2) building background knowledge, (3) setting purposes, and (4) focusing readers' attention. Using a

Likert-like scale, 84 New Jersey teachers (of grades 1–8) judged the values of these prereading strategies from *essential* to *of no importance*. Findings indicated that the teachers highly valued the prereading strategies in this survey, rating the majority as "essential" or "important." The range of agreed-upon values was from 77.4% (for eliciting background knowledge) to 90.5% (for building background knowledge).

BEAN, THOMAS W., & ZULICH, JAN. (1992). A case study of three preservice teachers' beliefs about content area reading through the window of student-professor dialogue journals. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 463–474). Chicago, IL: National Reading Conference.

Considers the beliefs and practices of three preservice content area teachers about the required content area reading course and its relation to their field experiences in content subjects. Three secondary education majors (in English, social studies, and biology) who were enrolled in the content area reading course were selected from a sample (N = 14) because their disciplines tended to be text-bound in nature. Ages of the participants were 39, 38, and 42, respectively. During the semester studied, students averaged eight dialogue journal entries, which were transcribed, analyzed, and organized topically. Significant areas described in students' journal entries included the value of content area reading, teacher thoughts and responses, and students' relationship with their cooperating teacher during concurrent field experiences. Students expressed interest in the strategies introduced in the course, yet they had concerns about the degree to which these could be implemented in a content area classroom. Similarities and differences across the three case studies are presented.

WILSON, ELIZABETH K.; KONOPAK, BONNIE C.; & READENCE, JOHN E. (1992). Examining content area reading beliefs, decisions, and instruction: A case study of an English teacher. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 475–482). Chicago, IL: National Reading Conference.

Extends earlier research by examining in-depth a secondary teacher's beliefs, decisions, plans, and instruction regarding content area reading. The subject was an English teacher from a metropolitan high school with a diverse student population. The teacher volunteer was selected because she held typical reader-based beliefs and relied on a variety of written text for instruction. Data ware gathered from a lower level English literature course comprised of 19 students and included administration of three modified beliefs instruments, classroom observations, and separate interviews over a 7-day period. Consistencies and inconsistencies were found between the teacher's beliefs and classroom practice. Although the teacher believed in students' using their prior knowledge as a basis for new learning, some of the students did not always see this connection. In addition, although she used a variety of teaching materials to meet students' needs, most of the instruction was teacher directed and presented material at a literal level. The teacher's responses seemed to reflect what she thought should be done rather than what was done in her classroom.

DAVIDSON, TOM, & MCNINCH, GEORGE H. (1992). What is important in reading in middle level classrooms: A survey of classroom teachers' perceptions. *Reading Horizons, 33*, 31–40.

Surveys middle level teachers (grades 4–8) to determine what reading practices they consider to be important and emphasized in their schools. Subjects were given 10 statements of belief about reading program implementation and were asked to rank the statements from greatest to least emphasis. Five of the statements were associated with skill mastery and five

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with the process of becoming a reader. Fifty-nine middle level teachers enrolled in graduate courses completed the survey. These teachers identified the five statements associated with skill mastery as receiving greater emphasis in their schools than the statements associated with becoming a reader. Differences between rankings for each set of five were statistically significant, indicating that the two sets were perceived differently.

TIGHE, MARY ANN. (1991, December). Influencing student teacher attitudes: Who, what, and how. *English Education, 23*, 225–243.

Surveys the attitudes of preservice teachers regarding effective English and language arts teaching practices and what factors are influential in determining those practices. Pre- and postsurveys were completed by 20 student interns. Four different areas were covered on the surveys: (1) literature and reading, (2) language, (3) composition, and (4) listening and speaking. Little change from pre- to posttest was found in attitude for any of the areas. Interns were asked to maintain a record of the time spent each week teaching in the four areas. The greatest contradiction between attitudes and practice occurred in the area of language. While the attitude surveys reflected the belief that the study of grammar does not affect usage and should not be emphasized during the junior high years, the time analysis showed a heavy emphasis on grammar drills and workbooks. Students were evaluated on mastery of grammar and usage through objective tests more often than through their writing skills, even though the surveys indicated the interns' attitude that tests do not reflect a student's ability to use language effectively. The interns ranked the cooperating teachers' practices and procedures as most influential in their classroom practices. The biggest problem or challenge interns faced, they reported, was the conflict between what was taught at the university and the requirements of the school.

WAKEFIELD, ALICE P. (1992, Fall). An investigation of teaching style and orientation to reading instruction. *Reading Improvement, 29*, 183–187.

Investigates whether a relation exists between teachers' learning styles (and subsequent teaching styles) and teachers' orientation to reading instruction. The researchers asked whether teachers who have a web-like, multidimensional ordering style value whole language more than teachers with a more methodical, step-by-step orientation to learning. The Gregorc Style Delineator and the Theoretical Orientation to Reading Profile (TORP) were administered to 57 elementary school teachers to determine the relations between style preference and scores. The Gregorc Style Delineator serves as a general indicator for the manner in which respondents mentally order their perceptions of the environment: concrete sequential, abstract sequential, abstract random, or concrete random. The TORP scores serve as a general indicator of the responding teachers' theoretical orientations to reading instruction: phonics, skills, or whole language. An ANOVA and the Scheffe Test showed a significant relation between two of the four style categories (abstract sequential and concrete random) and the teachers' orientations to reading instruction. Teachers who had abstract-sequential perceptions ranged from a phonic to a skills orientation. Teachers who indicated a concrete-random perception had orientations ranging from skills to whole language.

FLOOD, JAMES; LAPP, DIANE; & MONKEN, SUSAN. (1992). Portfolio assessment: Teachers' beliefs and practices. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 119–127). Chicago, IL: National Reading Conference.

Presents information on teachers' current beliefs and practices concerning portfolio assessment. The 259 elementary teachers participating in the study varied in experience and had some practice using portfolio assessment. The 36-item survey instrument used a modified 4-point Likert scale to measure responses in four areas related to portfolios: purpose, content, structure, and management. Twenty-four teachers were randomly selected and interviewed to extend findings. Teachers in this study believed that the primary purpose of portfolio assessment was evaluative and not instructional. A strong bias toward using writing samples to the exclusion of other materials was found. Portfolio use was confined to the language arts and reading and did not extend to mathematics, science, or social studies. Seventy-one percent of the teachers believed the teacher should design the portfolio alone rather than with the student. Teachers expressed uncertainty about management issues such as access, maintenance, and storage.

MEYERSON, MARIA J., & VAN VACTOR, JOHN C. (1992, July–September). The reading theoretical orientation of teachers who instruct special needs students. *Reading Psychology, 13*, 201–215.

Investigates the reading orientation of teachers who instruct students with special needs. These teachers were defined as those who taught students in remedial reading pull-out programs, resource rooms, and Chapter 1 programs (compensatory education programs funded by the U.S. federal government). The Theoretical Orientation to Reading Profile (TORP) was completed by 177 special needs teachers. The TORP identifies three theoretical orientations to reading: phonics, skills, or whole language. The results from the TORP indicated that the teachers in the study were not strongly associated with any one theoretical orientation but, rather, tended to be eclectic. In addition, the teachers clustered primarily into two, rather than three, orientations: whole language and skills/phonics. No significant differences among the three groups of special needs teachers (remedial reading, resource room, and Chapter 1) and their theoretical orientations to reading were found. However, 93% of the respondents qualified their answers to the TORP through unsolicited written commentary, indicating that their responses were dependent on circumstances.

II-3 Preservice/inservice preparation

GERSTEN, RUSSELL; WOODWARD, JOHN; & MORVANT, MARTHA. (1992, April). Refining the working knowledge of experienced teachers. *Educational Leadership, 49*, 34–38.

Describes an enhancement program in which university personnel served as mentors for eight elementary teachers in an effort to help the teachers assimilate research-based practices into their teaching repertoires. Classroom observations and teacher-mentor dialogue sessions were used to aid teachers in implementing selected practices. Two case studies of teachers are presented to illustrate the process used in assimilating research practices into the classroom. In end-of-year interviews the eight teachers were asked to discuss their level of comfort with the professional activity in which they were involved and to rate two aspects of the activities on a 5-point scale. Mean scores were 4.6 on compatibility with their personal style and 4.2 on comfort level.

KRAUS, CECILE D. (1992). Changes in primary teachers' instructional practices after year 1 of a collaborative whole language project. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 79–86). Provo, UT: College Reading Association.

Describes the results of a collaborative staff development project that focused on changing the instructional literacy practices of primary grade teachers. Twenty teacher volunteers from two urban schools participated in the school-based program. Teaching experience ranged from 0 to 23 years with the majority of teachers (90%) observed as having a skills approach to literacy instruction. The whole language course consisted of twenty 90-minute sessions held after school at either site during the academic year. Additional support included conferences, observations, team teaching, and problem-solving sessions. Each teacher was observed three times at the beginning and end of the school year; 10 teachers from a control group were also observed. Coded observations were compared, and they revealed that while most teachers did not switch their orientations over the 8-month period, they moved decidedly in that direction. Time spent on whole language practices increased 34% while traditional behaviors decreased 27%.

SHEPPERSON, GRACE M., & NISTLER, ROBERT J. (1992). Whole language collaboration project: Implementing change in one elementary school. *Reading Horizons, 33*, 55–66.

Describes the impact of the initial phase of a long-term inservice program aimed at restructuring one Texas elementary school's literacy program and focuses on the changes that occurred as teachers engaged in staff development sessions designed around effective change principles. Informal discussion among the principal, teachers, and district personnel focused on the use of whole language approaches to literacy to meet the needs of their school population. Students ranged from low to lower-middle socioeconomic status and at least half were non-English speaking. For the first semester, 14 workshops with university personnel focused on: (1) the identification of current practices, (2) the study of research-based whole language strategies, (3) the selection of whole literacy strategies to be implemented, (4) the establishment of student goals, and (5) the establishment of collegial relations among personnel. In addition, university researchers observed classroom procedures for 2 half-days each week. As teachers met, read, and talked, their concerns about whole language shifted, as indicated by teachers' responses to a questionnaire and entries in their response journals. However, classroom observations initially revealed few changes. Program evaluation, based partially on a third administration of the original questionnaire, revealed that teachers' concerns about themselves diminished and their concerns about tasks increased. In addition, teachers' written responses to evaluative statements reflected changes in classrooms and school-wide.

SHEPPERSON, GRACE M., & NISTLER, ROBERT J. (1991). Whole language collaboration project: Three case studies to represent change. In Timothy V. Rasinski; Nancy D. Padak; & John Logan (Eds.), *Reading is knowledge: The yearbook of the College Reading Association* (Vol. XIII, pp. 129–137). Pittsburg, KS: College Reading Association.

Describes the impact of the initial phase of a long-term inservice program, Whole Language Collaboration Project, aimed at restructuring one elementary school's literacy program. Three case studies are presented to illustrate the changes that occurred in elementary teachers who were considered to be traditional, average, and expert in whole language instruction. The multi-ethnic, urban elementary school served children of lower-middle to low socioeconomic status, over half of whom were non-English speaking. Nearly 70% of the children qualified for free or reduced-fare lunches; many were considered at risk. Researchers conducted 14 whole language inservices (45–60 minutes) with 23 volunteer teachers and the school principal. Data sources to substantiate change included audiotapes of weekly inservices, teacher journals, responses to questionnaires, field notes from classroom observations, and collaborative interactions with teachers. A constant comparative method was used to develop a theory about how collaborative efforts between university and school faculty members affected change. Findings and examples from the case studies are presented in relation to four declarations of change: (1) change is a process, not an event; (2) change is a highly personal experience; (3) change involves developmental growth; and (4) change is best understood as it directly affects classroom practice, students, and preparation time. Change is facilitated by committing time, meeting individual needs, and building trust among participants.

Protherough, Robert, & Atkinson, Judith. (1992, December). How English teachers see English teaching. *Research in the Teaching of English, 26*, 385–407.

Reports the results of a survey designed to assess the opinions of a selected group of 110 skilled English teachers in England and Wales about the ways in which they were prepared for their careers and how they view training for those entering the profession. The researchers used teachers' responses to open-ended questions as well as scaled items to investigate these teachers' perceptions of their development as teachers, their views of teacher education programs, and the ways in which their attitudes and behaviors have changed with experience. Teachers reported that the most important influences in their career were other English teachers, academic study, and professional reading. Teachers who were trained more recently valued their teacher education more than did older teachers. Preservice work that was felt to contribute to the transition to practice included the encouragement of poetry, reading, and writing and classroom work with novels and stories. The only area in which older teachers rated their preparedness more highly than did younger teachers was "knowledge of English language structure." The majority reported their teaching had changed dramatically with experience, largely toward emphasizing students' active responsibility for and involvement in their learning. The majority recommended their profession to others with reservations. Most respondents viewed personality, academic achievement, and professional training as qualifications for teaching English.

Button, Kathryn. (1992). Factors that enhance effective instruction: A single-subject case study of changes in the knowledge base and practice of a kindergarten teacher. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 483–490). Chicago, IL: National Reading Conference.

Looks at how a kindergarten teacher's orientations toward reading and writing change during a yearlong university course on early literacy and examines what factors influenced this change. The participant taught two sessions of a federally funded, all-day kindergarten class in an urban elementary school for 17.5 years. The children (15 in each morning and afternoon class) had the lowest scores in their age cohort on a standardized readiness test. The early literacy course met for 30 hours and used a variety of delivery formats, including videotaped demonstration lessons. Data collection took place over two years and included the administration of the TORP (Theoretical Orientations to Reading Profile), a survey of change contexts, participant observations, unstructured interviews, and videotaped literacy lessons. The three contexts that most influenced the changes that the teacher made were the literacy course, extended practice in her class, and the coaching she was given by university staff members. Extended time was an important factor in facilitating change.

Johnson, Carole Schulte, & Evans, Allen D. (1992). Improving teacher questioning: A study of a training program. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 65–70). Provo, UT: College Reading Association.

Tests whether a short training program of 200 minutes could increase the use of higher-level thinking questions by preservice teachers. Subjects in the study were 8 third-year college students and 14 fourth-year college students (N = 22) enrolled in an elementary reading methods course. The question training program introduced students to shared inquiry discussion groups, basal reading question types, Question-Answer Relationships, and developing initiating questions. The pre- and posttests consisted of students reading the same story and constructing five discussion questions to be used during a hypothetical observation by their school principal. Pre- to posttest comparisons reveal that the total number and percentage of literal level questions decreased from 60 (33%) to 6 (4%). Inferential, creative, and prior-knowledge questions (related thinking about text) increased by more than 12%. The total relative increase in higher-level thinking questions (related and extended thinking about text) was 27%.

RISKO, VICTORIA J. (1992). Developing problem solving environments to prepare teachers for instruction of diverse learners. In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 1–13). Athens, GA: American Reading Forum.

Documents and describes the role of the college professor during implementation of videodisc-based case methodology in an undergraduate remedial reading course. The course was a required practicum in remedial reading and had enrollments of 14 and 12 for the fall and spring semesters, respectively. Sessions were held twice a week for the first 7 weeks, after which students were assigned to a practicum setting to plan and implement a reading program for low achievers. The videodisc cases used during instruction portrayed authentic classroom and Chapter 1 scenarios and were supplemented by outside readings. Patterns of classroom discourse were discovered through an interactive analysis of participant-observer field notes. Findings suggested that involving students in case analyses provided multiple opportunities for enhancing their knowledge about problem situations and their ability to generate possible solutions. Discusses how developing knowledge is displayed, represented, and transformed.

RISKO, VICTORIA J.; YOUNT, DALE; & MCALLISTER, DENA. (1992). Preparing preservice teachers for remedial instruction: Teaching problem solving and use of content and pedagogical knowledge. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 37–50). Provo, UT: College Reading Association.

Analyzes communication patterns among preservice teachers during case-based instruction. Subjects were 12 undergraduate elementary and special education majors enrolled in a remedial reading and practicum course. Class sessions ($\underline{N} = 14$) involved analyses of video-based case studies and use of hypercard technology. Daily field notes were taken by two observers and examined for discourse patterns. The authors concluded that the instructional design encouraged the active engagement and generative learning of students.

HERRMANN, BETH ANN, & SARRACINO, JERI. (1992). Effects of an alternative approach for teaching preservice teachers how to teach strategic reasoning: Two illustrative cases. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 331–339). Chicago, IL: National Reading Conference.

Explores changes in preservice teachers' conceptual understandings, theoretical perspectives, and instructional actions as a result of participation in a restructured course. Subjects were 13 preservice teachers, ages 21 to 23, who were beginning professional education core courses and 9 graduate students near completion of master's degrees in reading. Data were collected over a 10-month period and included concept questionnaires (pre- and postmeasure), journal entries, reflective essays, concept webs (pre- and postmeasure), and lesson questionnaires (pre- and postmeasure). A constant comparative method was used during and after data collection to reduce the data into theoretical categories and properties. Results of the analysis suggested that preservice teachers did not learn how to teach strategic reasoning but, instead, learned how to think about literacy teaching from a variety of theoretical perspectives. All teachers developed new conceptual understandings. Changes in theoretical perspectives came slowly, with considerable variation among participants. Two case studies are presented to illustrate the observed changes.

ERICKSON, LAWRENCE; JOHNSON, MARGARET; & LOGAN, JOHN (1992, Summer). A survey of Illinois K–8 teachers' reading and writing preservice and staff development perceptions. *Illinois Reading Council Journal, 20,* 31–39.

Surveys K–8 teachers in Illinois to identify their current concerns with staff development and to relate those concerns with previous surveys. Questionnaires were administered to 200 elementary teachers who were asked to evaluate their preservice training for reading instruction, the content and quality of inservice programs they received, and the extent of their principals' involvement in inservice. The majority of the respondents (78%) had 11 or more years of experience and nearly 46% held graduate degrees. Approximately 50% of the teachers rate their preservice education for teaching reading as adequate or very adequate, while 45% rated it inadequate or very inadequate. However, nearly 55% of the respondents rated their preparation for teaching reading and writing processes as inadequate or very inadequate. Approximately 72% of the teachers rated the content of their staff development activities from adequate to excellent. The majority (57%) of teachers reported that their principals participated in staff development to a moderate degree and rated the quality of their principals' participation as adequate (59%). Compared with surveys conducted in 1970 and 1979, these teachers showed a reduced need for information about diagnosing individual needs, using supplementary materials, and developing word-attack skills. Among the new categories of information needs were whole language and reading and writing across the curriculum.

MOORE, SANDRA JEAN, & LALIK, ROSARY V. (1992). Circles within circles: The uses of storytelling within a seminar for preservice reading teachers. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 323–330). Chicago, IL: National Reading Conference.

Examines the nature of storytelling and its contribution to teacher development. The study was conducted at a major university's community service reading clinic in conjunction with a language arts course for preservice teachers. The course consisted of a seminar and an on-site tutorial experience. Participants were 13 preservice teachers, a participant observer, the teacher researcher, and the collaborating researcher. Narrative inquiry method was used to frame the study experience. Data sources were transcripts of seminar and tutorial sessions, field notes, course documents, and journal entries. Storytelling was an important language form operating within the seminar. The preservice teachers used storytelling within the context of the seminar to relate, support, and entertain personal perspectives and to envision future instructional possibilities.

SCHUMM, JEANNE SHAY; LEAVELL, ALEXANDER G.; GORDON, JANE; & MURFIN, PAMELA. (1993, March). Literacy episodes: What we have learned from undergraduate tutors and at-risk elementary students. *Florida Reading Quarterly, 29,* 11–19.

Presents a field-tested tutoring program, Literacy Episodes, designed by university and school-based personnel as an alternative to a subskills orientation to tutorial instruction. The program's intent is to foster the development of literacy skills and positive attitudes toward literacy. University undergraduates (mostly non-education majors) tutored at-risk elementary students for 60 hours. The undergraduate volunteers were monitored by graduate students majoring in reading and by school-based reading resource specialists. In each instructional Literacy Episode, the child and tutor read from and wrote in a dialogue journal and read to each other. The research analyzed the journal entries of three tutorial pairs for superordinate themes using constant comparison. Six themes emerged from the writing: value of literacy, future plans, rapport, lesson content, lesson evaluation, and remarks about academic progress. Other sources of data included interviews with selected elementary pupils and the open-ended responses on the tutoring applications and final evaluation forms. The researcher concluded that tutors were successful in adapting to their pupils. Suggestions are included for adjusting the tutoring procedures to encourage more reflection on lesson content and encouragement of reluctant writers.

II-4 Roles

Thompson, Richard A. (1993, June). Summary of reading consultant roles. *Florida Reading Quarterly, 29,* 52–55.

Asks reading consultants and reading professors to prioritize 30 functions of reading consultants through a mailed survey. A random sampling of 100 consultants and professors was selected from a list of subscribers to a professional journal in reading; 66 responses were received. The 30 functions were divided into three major areas: direct instructional assistance, inservice training assistance, and administrative duties. Items with cumulative response frequencies at or greater than 75% were designated as prime functions; those with response frequencies less than 75% were termed secondary functions. The 14 items in the category of direct instructional assistance ranged from 100% to 59%, with 11 items falling into the prime function category. Two administrative items were rated high enough to be counted as prime functions. The first was to provide help in selecting basal materials; and the second was to serve as a resource to teachers for materials, community medical help, psychological testing, special education facilities, and nonprofit tutorial centers.

Devins, Susan. (1992, Winter). Perceptions of the roles of literacy tutors. *Reflections on Canadian Literacy, 10,* 198–203.

Investigates the role of volunteer tutors in literacy programs as perceived by the tutors themselves and by their adult students. Identical questionnaires were administered to 32 pairs of volunteer literacy tutors and their tutees; learners, however, were guided through the questionnaire by the researcher, and their responses were taped. Seven categories of reasons for learning to read and write emerged from analysis of the open-ended portion of the questionnaire: employment, personal or self-development, functional daily living, leisure, social interaction, communication and understanding, and children's or grandchildren's benefit. Findings also indicated that tutors and learners ranked the same two most important reasons for learning to read and write: learning for one's own purposes and learning for employment. In general, learners identified specific and often functional uses for reading and writing, while tutors held more abstract notions of the importance of literacy. There was a discrepancy between tutors and learners in how they viewed the tutor's role; learners viewed tutors as teachers, but tutors viewed themselves as guides or friends. In relation to tutoring responsibilities, both groups viewed the tutor as having primary responsibility for process aspects of sessions, such as planning, helping learners feel relaxed, and giving praise. Tutors and learners ranked clarity of expression, patience, and understanding as important personal characteristics of tutors.

II-5 Evaluation of programs and materials

Henk, William A., & Rickelman, Robert J. (1992). Trends in statewide reading assessment: A closer look. *Reading Horizons, 33*, 67–82.

Reports the results of a survey to investigate whether U.S. state assessment practices are changing in light of current theoretical developments in reading. Survey items investigated the degree to which states assess students' prior knowledge, reading strategies, and attitudes toward reading as well as what kinds of passages and comprehension questions are used, how resulting data are interpreted, and what types of plans are considered for subsequent assessments. Data were received from 49 states, with 43 reporting that they assessed reading specifically. Several similarities were found: grade levels tested were similar across most states; many states used national standardized tests as their assessment measures; and most states tested with both narrative and expository materials. More states used shorter passages than longer passages, and few used content-specific passages. Most tests were timed and had practice examples. Comprehension questions usually followed the passages, although numbers of passages and questions varied across the states. While inferential and literal questions were asked on most tests, few states assessed prior knowledge. Few states assessed reading strategies or inquired about reading habits and attitudes. Ways in which test results were used varied considerably across the states. Several states suggested that future assessments were changing to be more in accord with current theory and practice.

Johns, Jerry L., & Van Leirsburg, Peggy. (1993). What teachers have been telling us about literacy portfolios. *Reading Horizons, 33*, 427–439.

Reports data collected from a 40-item questionnaire administered to 140 teachers about the potential of portfolios for assessing classroom literacy. Sixty-eight of the 140 teachers reported using portfolios previously; while 72 had no previous experience with classroom portfolio use. All were asked to rate their reactions toward the use of portfolios at different grade levels and for different language arts areas. More than 90 percent agreed that portfolios were appropriate for use at all grade levels. Most agreed that portfolios should be used to assess writing, spelling, reading, and language arts. Percentages of favorable responses were usually higher for those who had used portfolios previously than for those who had not. Most (60%) felt portfolios should sometimes be used as a basis for grades, should be used in conjunction with classroom and standardized tests (67% and 80%), and should be used to aid in placement for special support services (85%). When subjects ranked potential portfolio problems on a 5-point scale, the greatest concerns were using portfolios as the sole means for student evaluation (70%) and planning portfolios, developing and completing checklists used in portfolios, and replacing standardized testing with portfolios (about 50%). Respondents who had used portfolios previously listed items that were specifically included in their portfolios, with tallies indicating the inclusion of a wide variety of items.

Lamme, Linda Leonard, & Hysmith, Cecilia. (1991, December). One school's adventure into portfolio assessment. *Language Arts, 68*, 629–640.

Describes an inservice project that was planned and put into practice in one pre-K to Grade 2 Florida school. In the first year of the school improvement project, teachers met by grade level and developed two scales of literacy learning: a scale of writing development created from children's writing samples and a scale of emergent reading. In addition, each grade level had a checklist for recording children's progress. The second year of the program included the development of a response to literature scale. Portfolio assessment was made a schoolwide focus the second year of the inservice program, with the three scales becoming a part of the school portfolio. Additionally, teachers gathered three types of data:

observational, checklist, and interview or conference. Each teacher was asked to complete a questionnaire concerning what was easy or difficult about portfolio assessment as well as the issues that needed to be addressed in future inservice work. Interviews were conducted with teachers about strategies and portfolios being used in classrooms. Each teacher's involvement in portfolio assessment was analyzed using a scale ranging from *first stage* (nonuse) to *fifth stage*. It was noted that the degree to which teachers implemented portfolio assessment varied in direct proportion to their degree of involvement with whole language philosophy and practice.

EL-DINARY, PAMELA BEARD; PRESSLEY, MICHAEL; & SCHUDER, TED. (1992). Teachers' learning transactional strategies instruction. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 453–462). Chicago, IL: National Reading Conference.

Follows three teachers during their first year of training in a prototype of transactional strategies instruction, Students Achieving Independent Learning (SAIL). The primary goal of SAIL instruction is for students to get the gist of the text through the use of monitoring and problem-solving strategies. The participants taught grades 3, 4, and 6 and were first-year teachers at a racially diverse elementary school. Teachers were introduced to SAIL through a series of inservice meetings that were required for all new teachers. Teachers were observed weekly in their classrooms during reading instruction (24–27 observations per teacher), and interviews were conducted every 2–6 weeks (5–8 interviews per teacher). Findings suggested that the first year of strategic instruction was not easy for teachers in this study. Although all teachers made progress, they struggled to fit SAIL into their teaching. At the end of the year, teachers were not yet competent using the approach. This was attributed in part to their degree of experience and individual teachers' difficulty adopting the program's ideology.

PRESSLEY, MICHAEL; BERGMAN, JANET L.; & EL-DINARY, PAMELA BEARD. (1992, June). A researcher-educator collaborative interview study of transactional comprehension strategies instruction. *Journal of Educational Psychology, 84*, 231–246.

Develops evaluation procedures for determining teachers' perceptions of and attitudes toward one reading program's effects. Subjects were 14 elementary level teachers who had participated in the Students Achieving Independent Learning (SAIL) program of Montgomery County, Maryland, for at least two years. SAIL was developed to change instruction for at-risk elementary age pupils from a deficit remedial model to a student-wellness model. Its intent was to develop successful readers in the elementary school, regardless of prior instructional experiences or achievement. The instructional goal for children in the SAIL program was the acquisition of transactional comprehension strategies. Teachers and researchers collaborated in the development of a structured interview questionnaire which probed teachers' views about various effects of the SAIL program on children and teachers involved in the program. Teachers later responded to the final form of the questionnaire. Analyses of teachers' responses revealed their views of the program's strengths and weaknesses and an overall perception of a large number of positive effects.

TELFER, RICHARD J.; JENNINGS, ROBERT E.; & MOTTLEY, REED. (1992). Reasons "effective" strategies are not used: Student and teacher explanations. In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 15–31). Athens, GA: American Reading Forum.

Extends the results of an earlier study by examining why the perceptions of teachers, at-risk pupils, and not-at-risk pupils differ in terms of at-risk definitions and why strategies that are thought to be effective are infrequently used. Five teachers, five at-risk children, and five not-at-risk children in each of three small cities were interviewed. The teachers worked with both at-risk and not-at-risk pupils. At-risk children were those identified by their district. A 10-item structured interview was conducted, transcribed, and analyzed. Each group was found to have different views of programs designed for at-risk populations. Communication issues and recognition that at-risk children have problems beyond the school setting were identifiable explanations. There appeared to be an understanding among educators about the benefits of various teaching techniques and activities; however, these are infrequently used due to perceived time constraints.

KLASSEN, CHARLENE; & SHORT, KATHY G. (1992). Collaborative research on teacher study groups: Embracing the complexities. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 341–348). Chicago, IL: National Reading Conference.

Describes methods used to examine a collaborative research experience that involved a voluntary teacher study group consisting of 12 elementary teachers, the principal, the librarian, and four teachers from a neighboring school. The study group came together biweekly for the entire year to contribute critical dialogue and maintain a broad focus on literature-based approaches in the classroom. Data collected were session field notes and audiotapes, written teaching histories, field notes and artifacts from classroom visits, and teacher interviews. A smaller research team ($\underline{n}$ = 6) was formed from the original study group at the end of the year to discuss, analyze, and interpret the data generated. Analyses focus on the process involved in thinking with research participants, both in terms of what was being researched as well as how it was being researched. Discusses transformations achieved as learners-teachers-researchers through collaborative research.

SHORT, KATHY G.; CRAWFORD, KATHLEEN; KAHN, LESLIE; KASER, SANDY; KLASSEN, CHARLENE; & SHERMAN, PAMELLA. (1992). Teacher study groups: Exploring literacy issues through collaborative dialogue. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 367–377). Chicago, IL: National Reading Conference.

Questions how participants view the effects of study group experience on their theories, practices, and relationships with other teachers and educators. Nineteen educators (teachers, university faculty, a principal, and a librarian) comprised the study group that looked at literature-based instruction for elementary classrooms. The group met biweekly over the course of a year for approximately 90 minutes per session to share, reflect, and discuss designated session topics. Classroom interactions and observations were conducted among participants. From the original study group, four teachers and two university faculty members formed a small research team to analyze the data generated during the year. Six categories emerged from 226 statements in teacher interviews that related to what was significant about the study group experience: (1) building community and relationships; (2) living the learning process as adults; (3) seeing learning as a continuous process; (4) contributing as individual participants; (5) visiting classrooms; and (6) acknowledging participant voices. The potential of school-based study groups for supporting professional growth and development is discussed.

FRACTOR, JANN SORRELL; WOODRUFF, MARJORIE CIRUTI; MARTINEZ, MIRIAM G.; & TEALE, WILLIAM H. (1993, March). Let's not miss opportunities to promote voluntary reading: Classroom libraries in the elementary school. *The Reading Teacher, 46*, 476–484.

Surveys 183 K–5 classrooms in one metropolitan area in Texas to determine whether elementary children have access to well-designed classroom libraries. Field-based preservice teachers used a 16-item observational instrument to observe the physical characteristics of the classrooms. Items were based on the features of classroom libraries that have been supported by research as instrumental in promoting voluntary reading. "Well-designed" libraries were defined as basic, good, or excellent separately for grades K–2 and for grades 3–5. Results indicated that 88.5% of the classrooms contained children's tradebooks. Eighty-one classrooms (44.3%) had library centers of some type. The percentage of classrooms with libraries ranged from a low of 28.5% at fifth grade to a high of 72% at kindergarten level. At both the K–2 and 3–5 levels, a majority of the library centers were rated as basic. Approximately 92% of the 52 library centers at the K–2 levels were categorized as basic. For grades 3–5, 83% of the 29 library centers were classified as basic. Only two lower grade and one upper grade classroom libraries were identified as excellent. Examples of four excellent classroom libraries are provided.

Hoover, Donna B. (1992, Fall). Encountered difficulties and positive developments in whole language classrooms. *Journal of Reading Education, 18*, 78–84.

Presents results of a survey of 112 northeast Tennessee teachers to determine their perceptions about whole language and the successes and difficulties they experienced as they attempted to move toward implementation of whole language in their classrooms. Findings indicated that 71% of the teachers reported a moderate to reasonable amount of knowledge about whole language. Most teachers reported learning about whole language through staff development, colleagues, and their own professional reading. Seventy-eight percent of the teachers felt reasonably to extremely comfortable in implementing whole language; 58% reported a moderate to reasonable amount of overall success with whole language practices. Most teachers (70%) reported that they implemented whole language with an existing basal text. Respondents reported increases in classroom writing and literature experience. Teachers noted that disadvantages of whole language were disorganization, lack of effective management systems, and time demands for preparing and implementing instruction. The majority of teachers also perceived a lack of phonics instruction as a pitfall of whole language. Finally, teachers felt the need for practical inservice training and the opportunity to meet with other teachers.

Bealor, Shirley. (1992). Minority literature book groups for teachers. *Reading in Virginia, 17*, 17–21.

Reports the results of a 2-year project, Minority Literature Book Groups for Teachers, that was implemented in public schools in Fairfax County, Virginia, in order to acquaint teachers with minority literature. Volunteer teachers met in 35 book discussion groups (of approximately eight members) for at least three times over a 3- to 4-month period. Unstructured book discussions were intended to encourage the use of minority literature in the classroom and to enhance classroom discussion of the books. Teachers were free to suggest their own readings or borrow multiple text sets. End-of-project evaluation revealed uniformly positive comments from the teachers who participated. Teachers valued the project because they gained insights from others, developed their awareness of the richness of cultures within their schools, discovered universal connections, increased their sensitivity, and became more aware of their pupils' interests.

II-6 Reading interests and preferences

Latham, Glenn. (1993, February). Do educators use the literature of the profession? *NASSP Bulletin, 77*, 63–70.

Compares the professional reading done by 20 members of each of four professions: education, engineering, law, and medicine. Practicing professionals were interviewed to determine the books, magazines, and professional journals they typically read. Responses were sorted as to whether the reading was popular or professional. Educators read less professional literature than did any of the other groups. Lawyers read the most popular literature, followed by educators. The most frequent explanations teachers offered for not reading professionally were lack of time, technicality of educational research reports, availability of alternative knowledge sources, lack of incentive, and lack of availability of the literature. As a follow-up, the researcher visited 55 school libraries and faculty lounges in 18 U.S. states to assess the extent of their professional collections. Collections ranged in size from 144 to 1,137 books and journals; approximately 41% of these had never been checked out. Only 6% of the reading material in faculty lounges was considered professional reading compared with 64% from the popular press.

III. Sociology of reading

III-1 Role and use of mass media

WANTA, WAYNE, & WU, YI-CHEN. (1992, Winter). Interpersonal communication and the agenda-setting process. *Journalism Quarterly, 69,* 847–855.

Considers how interpersonal communication can enhance agenda-setting effects for issues receiving extensive or scant media coverage. Telephone interviews were conducted with 341 adults. They were read a list of five current issues receiving the most newspaper and television coverage and five issues receiving scant coverage and asked about the extent of their concern for each one. They were asked how often they discussed these issues with others and how often in the last week they had read a newspaper and watched a local or national news broadcast. Pearson coefficients of correlation and two regression analyses were used to analyze the data. The more exposure individuals had to the news media, the more they tended to be concerned with the issues receiving the most coverage. An even stronger correlation was found between the level of interpersonal communication that subjects had on media issues and media issue concern. Intensity of discussion correlated with both important and nonimportant issue concern. It was concluded that interpersonal communication can either enhance or compete with agenda-setting effects, depending upon the extent of the coverage of the issues.

SCHOENBACH, KLAUS, & SEMETKO, HOLLI A. (1992, Winter). Agenda-setting, agenda reinforcing or agenda-deflating? A study of the 1990 German National Election. *Journalism Quarterly, 69,* 837–846.

Questions whether frequent reporting of news issues can diminish the urgency of a problem. The amount of media coverage in Germany on two issues (unification of Germany and the environment) was compared with public opinion about their importance during a national election period. Media data came from a large-scale content analysis of nearly 10,000 political articles in 11 newspapers and 4 prime-time television newscasts from West Germany. The 892 subjects were interviewed by telephone at two different times about the two issues. Since conversations with others and political parties' campaigning did not show any relation to impressions of the importance of the issues, developments of issue salience appear to be due to respondents' reliance on regular news coverage. Two communication variables were more important than others: exposure to the tabloid *Bild* and interest in general political television stories. The tone of political coverage and its frequency were important factors.

DREW, DAN, & WEAVER, DAVID. (1991, Spring/Summer). Voter learning in the 1988 presidential election: Did the debates and the media matter? *Journalism Quarterly, 68*, 27–37.

Evaluates the amount of information that voters in one Midwestern city learned about the issue positions of the 1988 presidential candidates as well as the images voters formed of candidates from campaign coverage. Subjects (N=252) answered questions in telephone interviews about the amount of time they watched television newscasts and listened to the radio news, how many days per week they read newspapers, the amount of attention they paid to presidential campaign news, their viewing of three television debates, their interest in the campaign, and their demographic information. The dependent measure for political knowledge consisted of 11 questions about each candidate's stand on issues and 10 questions about candidates' images. Hierarchical regression analyses of predictors were used to test the data. The debates were more influential on knowledge than exposure to other types of news. Higher levels of education and campaign interest were related to more issue knowledge. Image knowledge was better predicted by political party loyalties.

GANTZ, WALTER; FITZMAURICE, MICHAEL; & FINK, ED. (1991, Winter). Assessing the active component of information-seeking. *Journalism Quarterly, 68*, 630–637.

Examines when and how people actively seek news information and the kinds of information they want most. Telephone interviews were conducted with 520 adults who responded to questions concerning how often they use the major news media, their exposure to news media the previous day, their interest in 13 topics covered in the news, their patterns of deliberate information-seeking for these topics, their information-seeking patterns for a specific recent event, and their demographic attributes. Information-seeking was measured by the number of days subjects actively turned to the media for more information about something they had already heard. Subjects indicated their interest in each of the topics on a Likert-like scale. They reported watching television news, on the average, 2–5 times each week, reading a newspaper five times each week, and reading one newsmagazine each week. They did not use the media on a daily basis for any of the topics assessed; 20% used the media for weather information every day. None of the other topics was sought more than every other day. Subjects' general interest in the topics was associated with their seeking more information.

DEFLEUR, MELVIN L.; DAVENPORT, LUCINDA; CRONIN, MARY; & DEFLEUR, MARGARET. (1992, Winter). Audience recall of news stories presented by newspaper, computer, television and radio. *Journalism Quarterly, 69*, 1010–1022.

Examines subjects' recall of details from four different media. The 480 subjects from three universities of different sizes were randomly assigned to 1 of 12 experimental conditions (involving three stories and four media). The dependent variable was the degree to which subjects recalled details from news stories. Recall was measured by tape-recording subjects' accounts of what they had learned and by having subjects complete a 24-item multiple choice test about the stories they read. The two measures were combined into a third index that averaged both assessments. These results from all three universities were combined. ANOVA and a series of t tests were used to analyze the data. The findings showed consistent patterns. Newspaper presentations were remembered best, followed in order by computer, television, and radio. Significant differences were found between the print and broadcast media, with print being favored, for all three measures of recall.

BENNETT, ELLEN M.; SWENSON, JILL DIANNE; & WILKINSON, JEFF S. (1992, Winter). Is the medium the message? An experimental test with morbid news. *Journalism Quarterly, 69*, 921–928.

Examines whether medium (print, photo, video) is an important factor in arousal of curiosity about morbid news events. The 131 undergraduate subjects read or viewed six reports: one good news story, one neutral story, and four morbid stories. One group ($n = 35$) read print versions only; a second group ($n = 50$) saw photographic images depicting the same events; the third group ($n = 46$) viewed televised versions of the events. Stories were rated on a 100-point thermometer rating scale, measuring attraction-aversion. A series of one-way ANOVAS tested the effects of the medium on the 0–100 ratings of the stories. Contrary to expectations, television reports did not elicit greater curiosity than the other two media except for the Challenger story (a morbid story) and the 1980 hostage release story (the positive story). There was also a significant difference for the latter story between photo and video. Analysis of the other four stories showed no significant differences among the three modes of presentation.

Shaw, Donald L., & Martin, Shannon E. (1992, Winter). The function of mass media agenda setting. *Journalism Quarterly, 69*, 902–920.

Asks if key groups of people agree on important social issues as a result of being exposed to the news media by both newspapers and television. A total of 595 adults from North Carolina rank-ordered the importance of six current public affairs topics. They indicated their use of media and demographic data. VU/TEXT was used to determine how often these topics were mentioned in the one newspaper analyzed. Poll and content analysis data were used to compare media use and agenda agreement for different types of groups: men and women, nonwhite and white, young and old, higher- and lower-formally educated, and rich and poor. When subjects increased their newspaper reading, their agreement on important public issues increased to near consensus within their sex, race, and age groups. Those of higher and lower education came close to sharing issues, although the sharing was less dramatic between rich and poor subjects. Group consensus on key issues was higher with increased television news viewing.

Chaffee, Steven H.; Nass, Clifford I.; & Yang, Seung-Mock. (1991, Spring/Summer). Trust in government and news media among Korean Americans. *Journalism Quarterly, 68*, 111–119.

Examines the relation between trust in American media and trust in the U.S. government among 239 immigrants from Korea and contrasts these reactions to those about Korea. Respondents completed a mailed survey in which they answered questions concerning their exposure to newspapers and television and provided demographic information that produced the control variables. Four indices of trust were constructed. The results of the application showed that media-government coefficients within each country are much higher than the between-media, between-governments, and between-country coefficients. Although the coefficients between media and government are significantly different for the two countries, the rather high U.S. coefficient of correlation suggests that a perceived connection between media and government is being carried over from Korea to the United States. Those who used both American and Korean media sources were aware of differences between Korean and American media-government relations. They saw little relation between the two in the United States but understood the strong ties of the Korean media and government.

Goodman, R. Irwin. (1992). The selection of communication channels by the elderly to obtain information. *Educational Gerontology, 18*, 701–714.

Examines the influence of subject variables on the selection of communication channels by the elderly to obtain information. The channels included five mass media and three interpersonal means. The 801 men and women subjects from nine organizations for the elderly responded to a 2-page questionnaire. ANOVA was computed with five audience factors (sex, age, educational level, living arrangements, and income) as independent variables. Dependent variables were eight communication channels consisting of the total times each was selected for each of five topics of special concern to the elderly. Education, age, income, and living arrangements were related to channel selection. Those who did not complete high school were less inclined to select any of the channels. Lower incomes influenced the use of newspapers and magazines. Sex did not directly influence source selection. Television and newspapers were the preferred channels; radio, magazines, and professionals were the least often selected channels. Those with less than a high school education and lower income tended to have less information-seeking orientation. Age played an important role, especially for those over 80.

Schweitzer, John C. (1991, Winter). Personal computers and media use. *Journalism Quarterly*, *68*, 689–697.

Investigates the relation between personal computer use and other mass media use. In telephone interviews, 263 subjects were asked about their ownership and use of personal computers and their time spent viewing television, listening to the radio, and reading newspapers and newsmagazines. Among the 263 subjects, 56 (21%) owned a personal computer and used it nightly for less than 1 hour (75%), 1–2 hours (20%), and more than 2 hours (5%). Computer owners read or looked at the newspaper four or five days each week, significantly more than nonowners. Nonowners watched significantly more hours of television than owners, but there were no significant differences between the two groups with respect to the frequency of viewing local or national news or time spent listening to the radio. Owners were significantly more likely than nonowners to subscribe to news and other magazines. Owners spent more time reading them, but the difference was not statistically significant. It was concluded that adopters of new information technologies do not necessarily give up more traditional communication media in order to adopt new forms.

El-Sarayrah, Mohammed Najib, & Ayish, Muhammad Ibrahim. (1992). Media coverage of the Gulf crisis. *Gazette*, *49*, 233–239.

Investigates professional, political, and organizational factors of reporters that may have impinged on reporting the Persian Gulf crisis from Amman, Jordan, before it evolved into war. Foreign correspondents ($\underline{N} = 40$) completed a 27-item questionnaire concerned with demographic data, problems in reporting, and the Gulf situation. Of these correspondents, 60% worked for television, 25% for newspapers, and 7.5% for radio. A total of 87.5% worked on a full-time basis, the number indicating the importance of covering the Gulf War. Only moderate reliance was placed on native newspeople to report the news. The majority of correspondents (58%) disagreed about alleged distorted coverage of the crisis. There was lack of consensus on the issues underlying the crisis. Forty percent thought the newsworthy components were political, military, and humanitarian. Language, lack of official cooperation, access to Iraq, and inadequate media facilities were given as major problems in reporting faced by the correspondents.

Wicks, Robert H., & Drew, Dan G. (1991, Spring/Summer). Learning from news: Effects of message consistency and medium on recall and inference making. *Journalism Quarterly*, *68*, 155–164.

Questions the way in which consistent and inconsistent information will be processed by 178 undergraduate students. Subjects were given both types of information on two topics: forest fires (harmful or medicinal to the environment) and population growth (good or bad for society). Three schema conditions (consistent, inconsistent, and control) were varied with three conditions of presentation (radio, television, and newspaper). Three dependent measures were used (unaided recall, aided recall, and inference making). Subjects were placed into one of nine conditions and read a set of varied news stories that produced the consistency manipulation. They then were exposed to a second set of news stories in which the content was constant but mode of presentation varied; responses to a questionnaire measured the dependent variables. Data were analyzed by ANOVAS. Subjects who received consistent information were most willing to infer, while those who received inconsistent information were more likely to remember facts. The mode of presentation had little effect.

III-2 Content analysis of printed materials

Armbruster, Bonnie B. (1992, October). Content reading in *RT*: The last 2 decades. *The Reading Teacher, 46*, 166–167.

Analyzes 51 articles published between 1969 and 1991 about content reading in *The Reading Teacher*. The review was organized around two themes: how to increase children's learning from texts and what students read. Most instructional methods were based on cognitive theory and research; most methods were broad in scope; and most implicitly acknowledged the need to foster independent learners. Trends included instruction in expository text structure, importance of integrating writing and reading, instruction in mathematics texts, and classroom organization for content instruction. More than half the articles on materials (10 of 17) were concerned with the use of children's literature.

Milam, John H., Jr. (1991, December). The presence of paradigms in the core higher education journal literature. *Research in Higher Education, 32*, 651–668.

Gathers empirical evidence, through content analysis, of the presence of paradigms in core higher education journal literature. A form of paradigmatic content analysis was used, according to a paradigm schema. Five journals for the years 1986 and 1988 provided data on topics and methodologies in higher education. Sixty-four content analysis questions were used. Paradigm classification results are reported as a percentage and a number of articles falling within each of 4 paradigms, 2 dimensions, and 11 assumption sets. Examples of studies were chosen to represent each paradigm and to explore the relation of topics and methodologies to each type of assumption. Approximately 78% of the journal articles were concerned with original research; 22% were essays. A wide range of topics was covered in the 471 articles, the most frequent being student development, psychology and counseling, and faculty. The functionalist paradigm dominated 98% (460 articles) of the journal literature in higher education. Approximately 1% fell within the radical structuralist paradigm; five articles fell within the interpretive paradigm; and no examples of the radical humanist paradigm were found.

Vincent, Richard C. (1991, Winter). Telecommunications research productivity of U.S. communication programs: 1984–1989. *Journalism Quarterly, 68*, 840–851.

Analyzes scholarly productivity of communication faculty and students in 15 communication journals from 1984–1989. Articles were scrutinized for the use of identifiable telecommunication terms in the title, within the first two paragraphs, or within figures or tables. Each article was coded for institutional affiliation, academic rank of the authors, and principal emphasis (traditional or new technology topic). The results showed 1,081 individual authorships, representing 686 actual writers, from 180 separate institutions in the United States. The most frequent contributors were at the assistant and associate professor ranks. The most emphasized subjects were broadcasting and video. Articles on the new technology amounted to under 10%. *Journalism Quarterly* published more telecommunication articles than the other journals.

Shoemaker, Pamela J.; Danielian, Lucig H.; & Brendlinger, Nancy. (1991, Winter). Deviant acts, risky business and U.S. interests: The newsworthiness of world events. *Journalism Quarterly*, *68*, 781–795.

Assesses the relative contribution of event and country characteristics (economic, political, and cultural) in predicting the prominence of coverage of world events in four U.S. media: the *New York Times* and the CBS, NBC, and ABC evening national newscasts. The dependent variable was how prominently an international event was covered; independent variables included characteristics of the event (deviance variables plus U.S. involvement) and the country as well as communication constraints. International events were sampled from the Keesing index and formed the base for the content analysis. Of the 355 events sampled from the 1984 and 1985 indexes, 28% were covered by the *New York Times*, and 12% were covered by the combined newscasts. The more deviant the event was, the more prominently it was covered. Political significance was positively related to both newspaper and television coverage; economic significance was positively related to newspaper coverage. No relation was found between communication constraints and coverage. Events which were deviant in certain ways from U.S. national values, and which occurred in nations of political and economic significance to the United States, were more likely to be covered in the news.

Pace, Barbara G. (1992, September). The textbook canon: Genre, gender, and race in U.S. literature anthologies. *English Journal*, *81*, 33–38.

Examines five U.S. literature anthologies to discover how women and people of color are presented as characters and writers. The 98 writers include 65 white men, 16 white women, 10 black men, 4 black women, 2 Native American men, and 1 Chicano man. The writer used a case study approach and found that most of the women in these anthologies were poets who also wrote short stories. More men than women wrote essays and speeches. In the stories analyzed, female characters were weak and passive and matched culturally encoded stereotypes of women. People of color were also stereotyped. Most of the stories represented the past.

Hanson, E. Mark; Henry, Walter A.; Hough, David. (1992, July). School-to-community written communications: A content analysis. *Urban Education*, *27*, 132–151.

Analyzes the quality and content of written messages sent from schools and district offices to residents in their communities. During a 6-month period, 594 written communications from nine schools and three central offices were analyzed through the use of a rating instrument similar to that used in marketing research. The results showed that by far the most messages were written by teachers and principals, that 2.5% were translated into a language other than English (mostly Spanish), that their purposes were clear, and that enough information was included to insure understanding. Most (91%) dealt with routine school business. Over 71% of the items dealt with issues that had surfaced recently rather than as part of a regular program of communication. The items were rated as dull, devoid of interesting style and creative language, and targeted for mobile, white, middle-class parents. Interviews were also conducted with educators, parents, and residents who had no involvement with the schools.

Martin, Shannon E. (1991, Spring/Summer). Using expert sources in breaking science stories: A comparison of magazine types. *Journalism Quarterly*, *68*, 179–187.

Examines the space devoted to science stories and counts the numbers and kinds of sources used in science, business, and popular newsmagazines during a 10-week period. Articles about one news-breaking science event totaled 23 in the science group, 9 in business, and 14 in popular news. The total number of sources was tallied and averaged for comparative uses. It was found that science magazines did not devote more space or include a greater number of science sources than popular or business news magazines covering the science event. It was concluded that readers of general newsmagazines can be informed of major science stories about as well as readers of special science magazines.

Swisher, C. Kevin, & Reese, Stephen D. (1992, Winter). The smoking and health issue in newspapers: Influence of regional economies, the tobacco institute and news objectivity. *Journalism Quarterly*, *69*, 987–1000.

Analyzes newspaper stories from six tobacco regions on issues related to the tobacco industry. The purpose was to examine the possible influence of the tobacco industry on coverage of three tobacco-related issues. The VU/TEXT newspaper base was searched for these stories. Modest differences in support of tobacco were found in headline slant and the use of tobacco industry sources in smoking-related stories when newspapers of different regions were compared. This lack of more striking regional differences in smoking coverage may be due to shared news routines and wire stories that exert a standardized influence on coverage.

Caudill, Susan. (1991, Spring/Summer). Trying to harness atomic energy, 1946–1951: Albert Einstein's publicity campaign for world government. *Journalism Quarterly*, *68*, 253–262.

Reviews print messages prepared by the Emergency Committee of Atomic Scientists immediately following World War II. The committee used direct mail, mass media, conferences, and radio broadcasts to promote the idea that a world government determined by the United Nations was the only solution to potential misuse of atomic energy. The appeal letters were characterized by themes of crises, death, and destruction. They became increasingly foreboding. None of the letters and only a few of the mass media publicity articles addressed the beneficial uses of atomic energy or how it worked. The focus was almost exclusively on the international consequences of atomic energy and the threat of war. Between 1946 and 1951, scientists Harold Urey, Albert Einstein, and Edward Condon wrote 51% of the 45 media articles published. The overwhelming majority of articles focused on the social, political, and international implications of atomic energy.

Rossow, Marshel D., & Dunwoody, Sharon. (1991, Spring/Summer). Inclusion of "useful" detail in newspaper coverage of a high-level nuclear waste siting controversy. *Journalism Quarterly*, *68*, 87–100.

Determines whether 12 newspapers that covered a high-level nuclear waste siting controversy provided enough information (details about people, places, and things) to enable readers to follow up on the information. The communities that were involved were classified as high-, medium-, and low-pluralism groups according to their heterogeneity (size, schools, businesses, and other characteristics). During a 5-month period, content analysis was conducted on 374 articles, almost half of which appeared on the front pages of newspapers. A total of 2,398 enabling opportunities were found, most in the medium- and high-pluralism groups. All were coded as containing complete (23%), partial (50%), or nonexistent (27%) information. In interviews, editors rated their personal interest in the issue and their personal view of the issue's importance to their communities. The content analysis and interviews showed that newspapers in less pluralistic communities (more homogeneous) provided a greater proportion of detailed information than did papers in more pluralistic communities. Greater proportions of this information were also associated with legitimized sources and with editors who were concerned about the issue.

Singer, Eleanor; Endreny, Phyllis; & Glassman, Marc B. (1991, Spring/Summer). Media coverage of disasters: Effects of geographic location. *Journalism Quarterly, 68*, 48–58.

Analyzes content of major newspapers, newsmagazines, and network news for periods in 1960 and 1984 for stories about natural disasters. Data came form a larger investigation. Each of the stories (952 in 1984 and 323 in 1960) was assigned to one of six broad hazard categories. Three factors were considered: number of fatalities, newness of the hazard, and geographic location. At both times, the number of deaths in natural disasters and their location affected the amount of coverage they received. News about U.S. natural disasters was given disproportionate attention in the U.S. press, but there was no consistent bias in favor of other parts of the world.

Plata, Maximino. (1992, Fall). Language in food advertisements. *Reading Improvement, 29*, 193–199.

Investigates the language used in food advertisements in newspapers from three different sized cities. A total of 476 food ads were categorized into three groups according to city size. Food ads from three well-recognized stores were selected from the same newspapers for four weekends in October. The analysis of the ads included the use of brand names, food names, descriptive vocabulary, and abbreviations. The analysis showed a wide variety of language, including motivational language which gave consumers information needed for comparative shopping. The three newspaper groups used similar language. Abbreviations appeared 662 times, many requiring excellent reading skills.

Miller, Kurt M., & Gandy, Oscar H., Jr. (1991, Winter). Paradigmatic drift: A bibliographic review of the spread of economic analysis in the literature of communication. *Journalism Quarterly, 68*, 663–671.

Examines 351 articles that focus on economic aspects in three communication journals published from 1965–1988. The number of articles stressing the economics of communication increased from 1965–1988. Comparisons were made among the journals regarding sources used, themes and issues addressed, and levels of analysis and methods used. Each journal appeared to have developed a unique methodical approach. A citation analysis identified core referents for the articles and gave evidence that communication scholars cited other communication journals more than journals from the economic field.

Griswold, William F., & Swenson, Jill D. (1992, Autumn). Development news in rural Georgia newspapers: A comparison with media in developing nations. *Journalism Quarterly, 69*, 580–590.

Examines the extent and nature of development reporting in 14 rural newspapers in Georgia and compares the findings from similar studies in developing countries. One issue per month for each newspaper was analyzed during one year for content about social or economic change needed in communities. A total of 323 development items were identified, accounting for 4.5% of the total news space available. Items concentrated on tangible, physical objects and less on intangible ideas and processes. The most frequent content categories were infrastructure and business development. The most frequently cited sources were government officials and workers (48%), followed by business sources (29%). The findings of similar studies showed that the reporting for developing countries tended to be more extensive, dealt more with agriculture and social services, was more government-oriented, and was more evaluative of development projects than in the present study.

CORBETT, JULIA B. (1992, Winter). Rural and urban newspaper coverage of wildlife: Conflict, community and bureaucracy. *Journalism Quarterly, 69*, 929–937.

Analyzes six Minnesota newspapers from urban and rural areas during a 9-week period to determine if the portrayal of wildlife stories is a function of the type of community in which they are reported. Variables explored were conflict, story themes, and reliance on bureaucratic or nonbureaucratic sources. A total of 592 wildlife stories in 204 issues were content analyzed. Five themes and five types of conflict were coded. Urban newspapers contributed 365 stories, with almost half of the stories being found in outdoor pages. Stories about wildlife conflict were more common in urban than in rural papers, but neither published much about conflict in the outdoors sections. The utilitarian theme was found more often in rural than in urban newspapers, while the urban ones found the stewardship theme to be more newsworthy. All newspapers depended heavily on bureaucratic sources for news.

CHIASSON, LLOYD. (1991, Spring/Summer). Japanese-American relocation during World War II: A study of California editorial reactions. *Journalism Quarterly, 68*, 263–269.

Analyzes editorials in three California newspapers that were published before and after the removal of Japanese-Americans from their homes and their placement in camps in early 1942. The purpose of this analysis was to determine change in editorial opinion over time. A total of 53 editorials were written that contained commentary about persons of Japanese descent. The articles were divided almost equally into two periods. A total of 34 editorials specifically referred to Japanese-Americans. Each newspaper was analyzed separately and seemed to accept the president's order to move Japanese-Americans to camps without question. The *San Francisco Chronicle* opposed mass evacuation in the first period, supported it in the second period, and attempted to use the same standard of values to support both positions. The *San Diego Union* advocated the necessity for mass evacuation and became more virulent as time went on; the paper gave no clear evidence to support its claims. The *Los Angeles Times* did not exhibit abrupt editorial changes or racial distrust. It was concluded for the three newspapers that editorial opinion of the constitutionality of the incarceration was undeveloped and that the editorial positions were based on acquiescence to presidential orders rather than on fact. The latter resulted in the newspapers supporting strong authoritarian measures rather than individual freedom.

FRITH, KATHERINE TOLAND, & WESSON, DAVID. (1991, Spring/Summer). A comparison of cultural values in British and American print advertising: A study of magazines. *Journalism Quarterly, 68*, 216–223.

Compares how cultural values are manifested in advertisements from comparable consumer magazines in Great Britain and the United States. The 372 ads, divided equally between the two countries, were analyzed according to individualism, equalitarianism, respect for authority, and direct speech. A combination of content analysis and semiotics was used to analyze the data. The advertisements were analyzed according to the following criteria: source, type of product, number of people in the ad and their status, company representatives, and headlines. Researchers selected ads that ran for one year between 1987 and 1988 and consisted of full-page, four-color advertisements that showed people. American ads showed single individuals significantly more frequently than British ones. Headlines in American advertisements used significantly more rhetorical devices than British ones. British ads were stratified by class, while American ones featured a homogeneous upper-class consumer. No significant difference was found in the use of company representatives (authority figures).

LESLIE, MICHAEL. (1991, Spring/Summer). Conflict resolution and the prestige press: *El Universal* and the Mexican oil crisis, 1938. *Journalism Quarterly*, *68*, 224–229.

Analyzes a Mexican prestige newspaper's coverage of the 1938 nationalization of foreign oil interests. Headlines, leads, and subheads that dealt with conflict were coded into four categories of prestige press attributes and one category of government attributes. Themes (209) were multiple-coded according to the number of attributes they contained. Comparisons were made before and after the March 18, 1938, declaration to analyze any changes in the two types of attributes. During the conflict the newspaper retreated from its prestige stance to a government-support position. Within three months it had regained its independence and balanced its support of government.

DICKSON, SANDRA H. (1992, Autumn). Press and U.S. policy toward Nicaragua, 1983–1987: A study of the *New York Times* and *Washington Post*. *Journalism Quarterly*, *69*, 562–571.

Examines the interdependence between newspapers and the U.S. government concerning the U.S.-Sandinista conflict. A qualitative content analysis was conducted on 1,633 randomly selected articles in the *Washington Post* and the *New York Times* between 1983 and 1987. A subset of 439 articles was coded to determine the direction of the sources as positive, negative, or neutral. In both papers the largest percentage of news about Nicaragua was produced by staff at home base; fewer than one-fourth of the stories were reported by correspondents based in Nicaragua or Latin America. The *Post* relied on wire reports considerably less than the *Times*. Reporters were more than three times as likely to rely on U.S. officials for information than on Nicaraguan officials. They rarely consulted the Contras. The majority of sources in both papers were neutral toward U.S. policy. Few were positive toward Nicaraguan policy. In both papers, government officials dominated and determined the valid issues.

CULBERTSON, HUGH M. (1992, Winter). Measuring agenda in an elastic medium: Candidate position papers. *Journalism Quarterly*, *69*, 938–946.

Analyzes position papers for 12 presidential candidates in the 1988 election in order to determine their agenda diversity. Statements made by candidates were coded into 10 topic categories. Agenda diversity was measured by three variables: number of topics, variation (standard deviation) of percentages of the candidate's statements across categories, and a summary measure, the H-statistic from information processing theory. Greatest agenda diversity was found for those candidates who remained in the race the longest and for the more liberal candidates.

MAJOR, ANN MARIE. (1992, Autumn). "Problematic" situations in press coverage of the 1988 U.S. and French elections. *Journalism Quarterly*, *69*, 600–611.

Examines 10 U.S. daily newspapers, 3 U.S. newsmagazines, and the U.S. edition of the *Economist* for evidence of problematic situations in press coverage of the 1988 U.S. and French presidential elections. The researcher, instead of conducting a topical content analysis, investigated how journalists translate campaign issues into problematic situations for readers. The investigation included 76 newspaper and 32 newsmagazine articles about the French election; 387 of the 4,200 newspaper stories and 243 newsmagazine articles that were studied related to the U.S. campaign. Each story was coded for eight problematic situation descriptions. About 75% of the stories from the French sample and 55.3% from the U.S. sample presented a problem context. For the latter, newsmagazines provided significantly more problematic issue definitions than did newspapers. Newspapers gave more emphasis than did newsmagazines to the "horse race" (issues of campaign style, funding, and dirty campaigning). About 25% of the stories for both countries emphasized the horse-race aspects of the elections.

BOWLES, DOROTHY A., & BROMLEY, REBEKAH V. (1992, Winter). Newsmagazine coverage of the Supreme Court during the Reagan administration. *Journalism Quarterly*, *69*, 948–959.

Investigates the extent to which the three leading U.S. weekly newsmagazines covered the U.S. Supreme Court during the Ronald Reagan presidency. Between 1981 and 1989 460 stories were published regarding 433 court cases. Articles were coded into one of seven categories for primary focus and into eight categories for quality of coverage. The articles were also coded for illustrations, such as sidebars and photographs. The amount of coverage did not vary greatly over time. Graphic elements accompanied 85.2% of the stories, with most of the newsmagazines being very similar. Almost half (48%) of the articles were about decided cases. Criminal cases ranked first, followed by civil rights and equal protection issues as well as First Amendment cases. Although readers of the three magazines learned about fewer than 10% of the decisions of the Supreme Court, these stories scored high on quality of coverage, far exceeding the quantity.

III-3 Readability, legibility, and typology

WARD, DOUGLAS B. (1992, Summer). The effectiveness of sidebar graphics. *Journalism Quarterly*, *69*, 318–328.

Asks if a modern, computer-generated bar chart that accompanies a news story aids reader comprehension. Subjects were 237 college students who were divided into five groups. Each student received one of five manipulations of a news story: the story only, the story with a bar chart, the story with the same bar chart after it had been adorned with shadow effects and artwork, the story with a table, and a sidebar story that described the information in the graph. The students read their material and answered a 23-item questionnaire without access to the material. The experiment yielded 223 usable responses. Four accuracy scores were computed, and *t* tests were calculated to compare each of the five manipulations of the story. The version with the sidebar story yielded the highest percentage of correct answers and the lowest percentage of incorrect answers in almost every case. Differences were statistically significant. The scores of those who saw the graphics were not significantly different from those who saw the table.

DAVID, PRABU. (1992, Summer). Accuracy of visual perception of quantitative graphics: An exploratory study. *Journalism Quarterly*, *69*, 273–292.

Investigates whether mass media graphics convey data accurately compared to control graphs representing the same data but without decorations or distortions. The latter were represented as simple bars and pies. Subjects were 24 undergraduate students in mass communication and journalism. They were told that for each graph the value of one of its elements would be given. Their task was to estimate the size of other elements based on the information given. Experimental and control graphs were in separate booklets. Five of the eight test graphs were perceived less accurately than the controls, indicating that some mass media graphics distort the data. Two of the test graphs, which had been selected because they violated one of the principles of graph-making, were perceived as accurately as their controls. It was concluded that some of the principles of graph-making that are considered to be conventional wisdom should be revaluated.

Barnhurst, Kevin G., & Nerone, John C. (1991, Winter). Design trends in U.S. front pages, 1885–1985. *Journalism Quarterly, 68*, 796–804.

Examines front pages of newspapers between 1885 and 1985 to determine changes in their styles and at which times newspapers adopted specific elements of modern style. Front pages were selected at 10-year intervals from three newspapers that were published between 1885 and 1985. Researchers coded 198 issues containing approximately 5,000 items. Various characteristics were coded for each front page, story, and illustration. The front pages became less dense and more orderly; the average number of items on the front page declined from a high of 58 for one newspaper in 1885 to a low of 7.29 in 1985. Until 1925 there was wide disparity among the three newspapers; after this date, there was increasing uniformity among the papers. The average number of stories dipped below 10 between 1965 and 1975. Individual reporters routinely received bylines for their stories after 1960. The prominence of illustrations on front pages increased. Changes were gradual and made front pages more efficient for readers. The sources of change were in design theory and news ideology and not in economics or technology.

Newton, Douglas P. (1992, September). The level of abstraction of textual materials: A new and an old measure compared. *Journal of Research in Reading, 15*, 117–119.

Compares the level of abstraction (LOA) of 10 general science books and 10 physics textbooks using two different procedures, one old (Flesch) and one new (concept analysis). Correlation coefficients between Flesch's R scores and the new LOA scores were significant, as were coefficients between the new LOA scores and the percentage of definite words. High coefficients were obtained when LOA scores were correlated with the percentage of polysyllabic words. The researcher concludes that the older Flesch procedure may be easier for practicing teachers and nonspecialists to use when calculating levels of abstraction of textual materials. The method of simply counting polysyllabic words also appeared to be a useful substitute for the more complex concept analysis procedures.

Schneider, David E. (1992, October). A comparison of readability levels of textbooks in public speaking and interpersonal communication. *Communication Education, 41*, 400–404.

Reports the readability levels of 16 contemporary public speaking textbooks and 7 skills-oriented interpersonal communication textbooks. The researcher used the Fry Readability Scale, Flesch Reading Ease Formula, and Gunning Fog Index on 25 samples from each textbook. The combined mean grade difficulties for the public speaking books were 11.48 (Fry), 12.29 (Flesch), and 14.41 (Gunning). The mean number of words tested in each textbook was 2552.33. The combined mean readability grade-level equivalents for interpersonal communication books were 11.87 (Fry), 12.46 (Flesch), and 13.70 (Gunning). The mean number of words surveyed in each book was 2552.71.

Sparks, Bernard I., III. (1993, February). Readability of ophthalmic literature. *Optometry and Vision Science, 70*, 127–130.

Analyzes the readability of a sample of optometric and ophthalmic journals. Sample paragraphs were transcribed from each of five optometric and five ophthalmic publications, all published in 1991. The Gunning Fog Index and the Flesch Reading Ease Formula were used to analyze the samples. The sample paragraphs from the ophthalmic journals averaged 28% more difficult to read than the paragraphs from the optometric journals. On the Gunning classification, the 10 samples ranged in difficulty from fifth grade to beyond the graduate level. In general, optometric journals tended to present information in a more concise word and sentence format than did ophthalmic journals.

DANIELSON, WAYNE A.; LASORSA, DOMINIC L.; & IM, DAE S. (1992, Summer). Journalists and novelists: A study of diverging styles. *Journalism Quarterly, 69,* 436–446.

Examines trends in the readability of news stories for each year from 1885 to 1989 in the *New York Times* and *Los Angeles Times* and compares those trends with readability patterns in English-language novels published over the same period. The newspaper samples consisted of 30 sentences that were randomly selected from the front page of one edition of each paper for each of the 105 years. A total of 6,300 sentences and about 160,000 words were examined. Five randomly selected sentences were sampled from randomly selected novels. A computer version of the Flesch Reading Ease score was used to establish readability levels. Readability of newspapers became more difficult over time, while that of novels became less difficult.

III-4 Reading interests, preferences, habits

ARON, HELEN (1992, November). Bookworms become tapeworms: A profile of listeners to books on audiocassette. *Journal of Reading, 36,* 208–212.

Reports on how 522 adults in the United States use audiobooks. The sample who completed questionnaires ranged in age from 21 to 70 and were well educated. Nearly half of these adults borrow audiobooks from libraries. They read one or more daily newspapers (86%), one or more magazines per month (95%), and four or more books per year (82%). About 80% of the subjects listen to audiocassette books while driving in a car. A correlation coefficient between the number of books they read and the number of tapes they heard was statistically significant (.001). The more books they read, the more books they listened to on audiocassette. They reported that listening encouraged reading. Almost 90% preferred full-length texts to abridged tapes. They listened to an average of 12 printed books and read an average of 12 books per year, favoring best-selling fiction. The identity of the oral reader was not important in their decision to rent, purchase, of borrow an audiocassette book.

TAYLOR, CLIVE R. (1992, May). The reading habits of Year II medical students. *The New England Journal of Medicine, 326,* 1436–1440.

Describes the reading habits of second-year medical students from one university in response to all the reading materials presented to them by their faculty. The researcher distributed 108 questionnaires; 72 were returned. Subjects were asked if they borrowed or purchased the 14 required and 13 recommended textbooks, the extent to which each book was read, their rate of reading, and their total number of hours spent in actual reading during the year. The total number of pages of required reading was 10,997; an additional 7,124 pages were recommended reading. The discipline of medicine demanded the most reading (2,600 required pages), followed by pharmacology (1,735) and pathology (1,468). Reading rates differed with students and discipline. Only a small number of students purchased more than five books. The majority reported reading more than 25% of only two or three books. Only two students read more than 25% of five or more books. It was concluded that the curriculum should reflect not only what it is desirable to learn but also what is reasonably possible to learn.

WEST, RICHARD F.; STANOVICH, KEITH E.; & MITCHELL, HAROLD R. (1992, Jan./Feb./March). Reading in the real world and its correlates. *Reading Research Quarterly, 28,* 34–50.

Examines differences between adult readers and nonreaders who were unobtrusively observed for a 10-minute period. The subjects were solitary adults waiting for flights in an airport departure lounge; they were classified as readers if they were engaged in recreational reading for 10 or more consecutive minutes (111) or as nonreaders (106) if they did not engage in any recreational type of reading during the 10-minute period. Subjects checked the items they recognized on tests of authors, magazines, newspapers, television programs, films, cultural literacy, and vocabulary. Foils were included in each test. Readers scored significantly higher on author, magazine, newspaper, vocabulary, and cultural literacy tests. The two groups did not differ significantly in their recognition of television programs, characters, actors, and films. Readers recognized more television newspersons than did nonreaders. Exposure to print was a substantial predictor of vocabulary and cultural literacy even when age and education were controlled.

III-5 Readership

LÖRINCZ, JUDIT. (1993, May). The sociology of reading: A comparison of novel reading in Hungary and Finland in the 1980s. *Journal of Reading, 36*, 642–646.

Discusses a joint Hungarian-Finnish study that compared how readers in both countries approached selected novels and the different roles fiction reading plays in the two societies. Interviews were conducted with teachers of the mother tongue, librarians, engineers, workers in the iron and metal industry, and agricultural workers. In one interview, questions were concerned with general cultural and reading habits; in the other interview, questions were related to two novels, both of which were read by all subjects. Answers to closed questions were analyzed by statistics; answers to open questions were content analyzed. The two novels were Balazs's *Hungarians* and Meri's *Manila Rope*. Both novels presented a sort of national character through the view of peasants. The readers differed on whether they found symbolic meaning in the novels. It was found that the novel can be an adequate communication channel between cultures. Differences in the general reading habits of subjects in both countries were also reported.

STAMM, KEITH R., & GUEST, AVERY M. (1991, Winter). Communication and community integration: An analysis of the communication behavior of newcomers. *Journalism Quarterly, 68*, 644–656.

Prepares a model of community integration by focusing on newcomers in a community and relates the earliest stages of that integration to communication behavior, namely newspaper reading and subscribing. Telephone interviews were conducted with 400 newcomers to a western U.S. city. They answered questions concerning their lives in their previous community of residence (factors that made them want to stay and want to move) and their efforts in community integration after the move. Four communication variables were included in the survey: sources used for getting information about the new community, newspaper reading, newspaper subscribing, and number of issues read each week. When the newcomers arrived in the city, newspapers did not fill their information gaps especially well. The people who were most reluctant to leave their old communities were most interested in becoming integrated in their new one in terms of gaining information.

III-6 Library usage and services

MARCHANT, MAURICE P. (1991, July–September). What motivates adult use of public libraries? *Library & Information Service Research, 13*, 201–235.

Predicts library use from four motivators derived from major life interests: home and family life, vocational growth, religion, and politics. Also tested was the ability of six user characteristics to predict library use: sex, marital status, family income, age, education, and number of minor children living at home. Data came from interviews with 200 adults in Provo, Utah, who were selected by a random-structured procedure. Subjects were asked whether they used the library to satisfy any of the four life interests and to what degree they were interested in these aspects of life. They were also asked how many times in the previous three months they had visited the library and whether they possessed a current library card. Demographic and sociological data also were gathered. Data were analyzed by means of regression, ANOVA, and ANCOVA. Also tested was the capacity of the six user characteristics as supplements to the motivators in predicting specific uses and as supplements to the composite use variable in predicting the general uses. Only sex differences and number of minor children supplemented composite use as predictors of general library use. Family income and marital status were not predictors of library use. The power of education to predict use was derived largely from its positive relation with vocational growth and home and family involvement.

SELTH, JEFF; KOLLER, NANCY; & BRISCOE, PETER. (1992, May). The use of books within the library. *College and Research Libraries, 53*, 197–205.

Describes circulation and in-house use of 13,029 volumes (randomly chosen from 1.1 million volumes), both serials and monographs in all subject areas, used over seven years. In addition to keeping circulation records, the university library studied records of in-library use by means of date-stamping in red ink the books left in different places in the library. Computer-generated tables were extracted from the data, recording the numbers of external and internal uses of volumes. It was found that more than 30% of the monographs and 25% of the serial volumes had one kind of use but not the other. If materials were weeded out based on circulation alone, at least 112,000 volumes that had been recently used would be eliminated from a million-volume library. Monographs received more external use; serials received more in-house use. There were striking differences by subject. The findings showed that internal use cannot be inferred from circulation figures.

PECK, DAVID R. (1992, Spring/Fall). Will compact disks last in libraries? *Current Studies in Librarianship, 16*, 74–82.

Reviews literature from 1989 to 1992 about long-term survival of optical compact discs in libraries in the form of CD-ROMS (Compact Disc-Read Only Memory). CD-ROMS have become an important medium for audio recordings and databases. The reviews have shown that environmental conditions and manufacturing quality are major factors affecting the survival of CD-ROMS. Although research had not been encouraging for the longevity of optical discs, some advancements have been made in the technology.

LIU, ZIMING. (1993, January). Difficulties and characteristics of students from developing countries in using American libraries. *College & Research Libraries, 54*, 25–31.

Identifies difficulties experienced by college students from developing countries in their use of American libraries. Interviews were conducted with 54 foreign students (mostly Asian) at the University of California in Berkeley, California. They encountered numerous problems in using the school's library. These included difficulty in understanding library terminology; unfamiliarity with the library's classification system, subject headings, reference works, open stacks, and card catalogs; and plagiarism. Students in the natural sciences usually had fewer difficulties than those in humanities and social sciences. Those who had fewer difficulties were more proficient in English and came from countries that were more strongly influenced by American culture. Recommendations are given for improving library services for foreign students.

JOWKAR, A. (1992, Autumn). A comparison between the competencies deemed necessary for teacher-librarians in Iran and those suggested by librarians from developing countries. *Education Libraries Journal, 35*, 47–57.

Investigates the viability of a single library education program for the education of teacher-librarians in 29 developing countries. Data from 39 professional librarians were analyzed. Results were compared with those from a similar survey done for teacher-librarians in the Islamic Republic of Iran. Similarities were found between the two studies. The overall view appeared to be that a single library program for the education of teacher-librarians is possible, although in each of these countries there are specific needs and cultural characteristics that need to be met.

WEITZEL, ROLF. (1992, September). Literature awareness among health staff in developing countries. *International Information and Library Review, 24*, 203–212.

Finds that health staffs in third-world countries are poor users of literature and library services. The main reason for the lack of literature awareness is the tradition of oral transmission of knowledge. The library orientation programs that are offered to undergraduates in most colleges are inadequate. National or regional programs are needed to promote library use and awareness, especially among medical and nursing students. These programs require a gradual process of adaptation and modification and a more thorough approach than has been taken. They also require active participation of the faculty as well as different policy and financial commitments of the governments. If the literature awareness of future generations of health-care workers is not heightened in these countries, serious consequences may occur with the quality of medical care in large parts of the developing world.

GARLAND, KATHLEEN. (1993, Winter). An analysis of school library media center statistics collected by state agencies and individual library media specialists. *School Library Media Quarterly, 21*, 106–110.

Questions state education agencies and individual elementary and middle school library media specialists about the statistics they regularly collect. Surveys were mailed to a nationwide sample of 4,500 specialists with a 57.7% response rate. No single media statistic was collected by all states. Three types were collected by a majority of state agencies: expenditures, holdings, and personnel. About 53% of the elementary and middle school respondents reported that they collected circulation data, in contrast with 12% of the state agencies. The size of the school's population was related to the collection of circulation statistics; 57.5% of the schools collected for print and nonprint materials; 40.8% collected for print only. Separate statistics for fiction and nonfiction were collected by 66.7% of the respondents.

UMUNNAKWE, U.S. (1992). The role of school libraries in Nigeria's new education policy. *Library Review, 41*, 49–54.

Suggests ways that school libraries in Nigeria can be improved to serve the nation's schools after the country had embarked on a new 6-3-3-4 system of education. The schools now lack balanced collections, trained librarians, and adequate equipment. The new system of education is different and improved, and it needs well developed school libraries. The federal government of Nigeria's White Paper makes provisions for school libraries but avoids providing funds for them, instead shifting the responsibility to state governments that have no money. Suggestions for improving the school library situation include setting up standards for libraries, recommending that reading should be taught up to the junior secondary school level, establishing school libraries in each state's capital, and realizing the need for mobile libraries.

DeCandido, Grace Anne A., & Mahony, Alan P. (1992, June). Overworked and underbudgeted: Staff and funds for school library media centers 1992. *School Library Journal, 38*, 25–29.

Presents data based on results from a telephone and fax survey in the United States that asked how many school library media specialists were in each state and what was the current condition of educational funding for school library media centers. Responses were received from 38 of the 50 states. Wisconsin reported the highest proportion of school library media specialists to students, one for every 58 pupils, while California reported one specialist per 8,511 students. New Hampshire ranked last in the United States in state aid to school districts. The report is presented as a state-by-state breakdown.

Doll, Carol A. (1992, Summer). School library media centers: The human environment. *School Library Media Quarterly, 20*, 225–230.

Reviews research and expert opinion concerning library media environments. Discusses ways in which people behave in physical locations with concern for personal space and territoriality. Points out the need for varied environments and explains how to achieve this variety. Discusses applications of color, private space, seating, carpeting, and ownership of space in school library media centers.

Van Orden, Phyllis J., & Wilkes, Adeline W. (1993, January). School library media centers and networks. *Library Resources & Technical Services, 37*, 7–17.

Investigates the impact of library networks on school collections and library services. Questionnaires were completed by 159 library personnel whose school districts, ranging from 1 school to more than 200 schools, participated in networking. They reported on the benefits and barriers of networks; the implications of networking on cataloging, classification, and processing practices; interlibrary loan patterns; resource sharing; and responsiveness of teachers and students to networking. Benefits included a variety of services such as network newsletters, consultation services, technical assistance, and curriculum planning; an opportunity to communicate with other media specialists; joint purchasing; and interlibrary loans. Commonly cited barriers included psychological barriers (attitudes) political and legal barriers, funding, communication, planning, lack of leadership at the district level, and space and facilities in crowded schools.

Shaw, Debora. (1991, April–June). An analysis of the relationship between book reviews and fiction holdings in OCLC. *Library and Information Science Research, 13*, 147–154.

Studies the relation between 1,330 book reviews and over 78,000 holding libraries for 200 fiction titles. Each book title was checked for the number of reviews about it in the Book Review Index from 1986 through 1989. The number of reviews received for a book and the number of libraries in which the book was held were significantly correlated ($r = .62$). Additional analyses looked at the relation between type of fiction (general, mystery, or science fiction), number of reviews, and number of holding libraries. Most of the titles (142) were general fiction; these titles were found in 55,898 holding libraries and received 971 reviews. The coefficient of correlation between the number of reviews and the number of holding libraries for general fiction was .669. No significant relation was found for mysteries. Regression analyses were conducted with the data and indicated that the relation between number of reviews and number of library purchases was best described as a power curve.

PEEL, BRUCE. (1992, August). Fernando Columbus and his library. *Canadian Library Journal, 49*, 295–297.

Describes the interest of Christopher Columbus's son, Fernando, in libraries and books. He was known as a bibliophile, a book collector, a proponent of a national library in Spain, and an opponent of censorship. By the time of his death in 1539, he had assembled a library estimated at between 15,000 and 20,000 volumes. Fernando was a wealthy man who traveled extensively in Europe and purchased books and manuscripts wherever he went. He noted the place, date, and price of each book he purchased and had plans for cataloging the books, probably for the purpose of making them a part of a national library. After Fernando's death, the library was given to a nephew who did not accept the responsibility of maintaining it. Only a remnant of the library remains today.

III-7 Social and cultural influences on reading

GUNTHER, ALBERT C. (1992, Summer). Biased press or biased public? Attitudes toward media coverage of social groups. *Public Opinion Quarterly, 56*, 147–167.

Analyzes the effects of people's involvement with specific groups on the ratings of newspaper and television news credibility. Data were derived from a national probability sample conducted in 1985, in which interviews and mailed questionnaires from 985 subjects were used. Data were tested by probit analysis. Group involvement and group membership predicted credibility judgments for both media more systematically than any other variables measured, including the ones most investigated in previous similar studies. As hypothesized, a subject's own group identification proved to be the strongest predictor of ratings of television and news coverage. Replication across social groups strengthened the evidence by providing built-in controls. It was concluded that an important part of the variance in trust of mass media news is within people rather than between people.

III-8 Literacy and illiteracy

KIRSCH, IRWIN S.; JUNGEBLUT, ANN; & CAMPBELL, ANNE. (1992). *Beyond the school doors: The literacy needs of job seekers served by the U.S. Department of Labor*. Washington, DC: U.S. Department of Labor.

Summarizes results obtained from an individually administered literacy assessment given to a nationally representative sample of about 6,[illegible]00 adults who participated in two programs funded by the U.S. Department of Labor (DOL). The two programs, the Job Training Partnership Act and Employment Service/Unemployment Insurance, provided services to individuals who want to enter or reenter the work force or those who seek to improve their status by obtaining a better job. The following three types of literacy tasks were incorporated into the DOL assessment: prose tasks that involved reading newspaper articles, editorials, and stories; document tasks that involved job applications, payroll schedules, and maps; and quantitative tasks that involved a bank deposit slip, order form, and advertisement for a loan. Each participant responded to a subset of 40 of the 180 total tasks with 60 minutes allowed for one-on-one testing and another 20 minutes for the collection of demographic and other data. Approximately 40% of participants in the two programs demonstrated literacy skills in the lowest 2 of 5 defined levels on each of the three literacy tasks; about 20% in each program demonstrated proficiencies defined by the highest 2 of the 5 levels. Blacks and Hispanics were disproportionately represented at the high and low levels when compared with white respondents. About 75–95% of participants with 0–8 years of education and 65–70% of those with 9–12 years of education but no high school diploma were in the lowest two levels on each of the three literacy scales.

GORDON, EDWARD E.; PONTICELL, JUDITH A.; & MORGAN, RONALD R. (1991). *Closing the literacy gap in American business.* New York: Quorum Books.

Gives an overview of adult literacy, including historical and current statistics on adult illiterates in the United States as well as in various other countries, with particular focus on workplace literacy skills. Reviewed are various basic skills educational training programs for the adult worker. The authors then discuss their own literacy training approach, the Individualized Instructional Programs (IIP). Case studies are presented in which the program was used with hourly workers and management employees. Results of three small pilot studies employing IIP are reported in an appendix. Both pretest scores and extended hours of tutoring appeared to have a positive influence on posttest performance. Qualitative analyses indicated growth in academic skills, study skills, and motivation.

GOWEN, SHERYL GREENWOOD. (1992). *The politics of workplace literacy: A case study.* New York: Teachers College Press.

Reports an ethnographic study of an adult literacy project that was conducted with workers in a hospital. Participants in the study were hospital employees who worked in housekeeping, food service, and laundry. All were African Americans and ranged in age from 19 to 63. In addition to following the employees as they participated in literacy acquisition skills over the 11-month study, the author observed and interviewed other individuals such as the supervisors, managers, and personnel staff of the hospital. The author served as an assistant, rather than a participant observer, and functioned as an active tutor for classes that met 4 days a week for an hour and a half during 9 months. Data collected were in the form of field notes, tape recorded interviews, and tapes of class sessions and staff meetings. Observations also were collected in the hospital cafeterias, elevators, and corridors. The focus of the study concerns the beliefs about language, learning, and work that are shaped by the various interests in the program: the funding agency, academic and research staff, and outside consultants; the hospital management; the instructors and tutors; and the employees. The author notes that the real agenda for the workplace literacy training may not have been to increase literacy skills but to change the behavior of the participants to more closely match mainstream culture. It is felt that workplace literacy training that attempts to initiate minority workers into mainstream ways of communication and behavior will be met with resistance and that little significant long-term change will occur.

QUIGLEY, ALLAN (1992). Looking back in anger: The influences of schooling on illiterate adults. *Journal of Education, 174,* 104–121.

Examines reasons that adults do not participate in traditional Adult Basic Education (ABE) and adult literacy programs. Interviews were conducted with 20 adults (12 female, 8 male; 18 black, 2 white). The adults, ages 18–57, had been termed *resisters* because each had chosen not to attend literacy programs. The principal reason for this choice was that they thought literacy classes would be no better than school. Although these adults stated they would not return to school, they said they thought they should return and that education is important. Four types of resistance were identified: personal, political, ideological, and age-based. The adults felt they had been ignored in the classroom; only a few teachers were remembered positively. Literacy and adult basic education had little or no significance for those over age 50. They all said they would do whatever was possible to see that their children remained in school.

Finlay, Ann, & Harrison, Colin. (1992, November). Measuring "success" in reading in Adult Basic Education: A United Kingdom Perspective. *Journal of Reading, 36*, 164–172.

Compares assessment methods for ABE instruction in the United Kingdom with those in the United States. The first major impetus for adult literacy in England began in 1975 with the establishment of an organization that became the Adult Literacy and Basic Skills Unit. Informal methods of assessment are preferred there instead of standardized tests. Criticisms of the use of the latter are given. The difficulty in establishing construct validity and general applicability of tests to diverse ABE populations is discussed. In the United Kingdom, students who are not working towards a qualification have generally been assessed by the combined judgments of tutor and student. Goals are set by the tutor and student; students decide at regular intervals where they are on a continuum ranging from *I've started* to *I'm confident about this now*.

Ziegahn, Linda. (1992, Fall). Learning, literacy, and participation: Sorting out priorities. *Adult Education Quarterly, 43*, 30–50.

Explores, in a qualitative study, the motivations of adults with low literacy skills toward literacy and learning. Subjects were adults in a rural reservation community in western Montana. Initially interviewed were 16 informants familiar with the community; the informants were used to identify community members who needed help with literacy tasks and to learn how others in the community viewed the phenomenon of low literacy. Later, each of 27 adults was interviewed in two or three sessions about his or her learning. Included in the interviews were questions related to what individuals did when they needed help with reading and writing problems and who helped them and how. Low literate adults did not see participation in adult education as synonymous with learning. Practical application, understanding, and challenge motivated low literate adults to learn. Most deterrents to learning related to participation in literacy education rather than learning. Women who rarely left the home environment had difficulty in perceiving themselves as learners.

Meyer, Valerie; Estes, Sharon, L.; Harris, Valorie K.; & Daniels, David M. (1991, September). Norman: Literate at age 44. *Journal of Reading, 35*, 38–42.

Presents a case study of a 44-year-old man who progressed from being unable to read or write to being able to enjoy reading newspapers and social studies books. He had a strong desire to read and enrolled in a local adult education program. The different approaches used by three different tutors included language experience, writing, alternating reading with the tutor, and environmental print books. It was estimated that the student was reading at the 6th- or 7th-grade level at the time this report was prepared. Reasons for his success are included.

Mehran, Golnar. (1992, May). Focus on literacy: Social implications of literacy in Iran. *Comparative Education Review, 36*, 194–211.

Describes the role and function of literacy education in the Islamic Republic of Iran. The postrevolutionary literacy movement of Iran was established in 1979. Literacy education is a traditional program, limited to teaching the three R's and propagating Islamic culture; it takes place at two levels. The Introductory Cycle lasts 4–5 months, meets 2 hours daily, and aims at familiarizing the participants with the tenets of Islamic culture and enabling them to recognize the alphabet, read and write simple Persian texts, and learn arithmetic for their daily needs. Completion is equivalent to end of the second grade. The Complementary Literacy Cycle lasts approximately 6 months, meets 2 hours daily, and includes Persian, arithmetic, dictation, the study of the Quran, Islamic culture, and composition. Those who finish both cycles should theoretically be able to attend fifth grade. Twice the number of Introductory as Complementary classes have been held. The majority of illiterates live in rural areas where fewer classes have been held. Female participation has been facilitated by the formation of single-sex classes. Most of the instructors (65%) are women. The instructional materials have been written by a central research office of the literacy movement. The literacy program had reduced the illiteracy rate from 63.5% to 38.3% since 1979.

COMINGS, JOHN P.; SHRESTHA, CHIJ K.; & SMITH, CHRISTINE. (1992, May). A secondary analysis of a Nepalese national literacy program. *Comparative Education Review*, *36*, 212–226.

Reviews the findings from seven evaluation reports of programs conducted under the National Literacy Program in Nepal between 1986 and 1990 and draws conclusions from the collective findings. The programs were different from each other, although they were all conducted in rural settings. The basic courses lasted 6–9 months with a total of 300 hours. In 1990 and 1991 over 120,000 people were served. The overall dropout rate is approximately 50%. With good materials and a good instructional design, the dropout rate was lowered by attention given to teachers: their training, selection, and supervision. At least 70% of the participants were women. All classes were conducted in Nepali, the national language. Those who spoke Nepali tended to score higher on the tests. The data show that at least 50% of the completing students scored above 50% on the tests. Those who remained in the program for 9 months scored higher than those in the program for 6 months. Many retained or improved the skills acquired in literacy classes. Instruction served effectively for teaching knowledge and attitudes in relation to the subject matter related to health, family planning, ecology, and agriculture.

MALMQUIST, EVE. (1992). Women and literacy development in the Third World. A rapsodic overview. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 7–41). Linkoping, Sweden: Linkoping University.

Reviews research about literacy around the world with emphasis on women's illiteracy in developing countries. Included are statistics on the global literacy situation and research findings about discrimination in literacy development, with a widening gap between men and women, sex differences at various school levels, functional literacy, consequences of discrimination of females, and constraints preventing women from literacy acquisitions. Difficulties that women in developing countries face in acquiring literacy include hostile families, local traditions, lack of time because of home and farm duties, lack of child care facilities, and discrimination of girls starting from birth. More than half of the population in developing regions have never been to school and have never had a chance to gain literacy. The percentage of illiterates in many countries has decreased. The absolute numbers are estimated to increase by 25–35 million people per year because educational progress has not kept pace with population growth and many new literates relapse into illiteracy.

DIGHE, ANITA. (1992). Women and literacy development in India. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 42–61). Linkoping, Sweden: Linkoping University.

Highlights statistics on female literacy in India in relation to different states, variations within the states, urban to rural differential, and various socioeconomic groups. Between 1981 and 1991, the number of literates increased by 50.5%, but the number of illiterates also increased marginally, by 7.32%. The decrease in illiteracy was attributed to increased primary education and adult literacy efforts. Among the barriers to literacy for females are societal expectations of their place in the home, lack of time, and low self-image because of their low status and role in society, as emphasized by religion, customs, and traditions. These women often do not see benefits from being literate. Two programs have affected female literacy: Women's Development Programmes and Mahila Samakhya. Literacy is not imposed on the women; they have a chance to ask questions, seek answers, and then seek literacy when its value becomes evident to them. Former programs did not meet the needs of the women because they were planned by males who designed the programs from an essentially male perspective.

VARAVARN, KASAMA. (1992). Flowers in bloom. An account of women and literacy development in Thailand. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 89–115). Linkoping, Sweden: Linkoping University.

Reports on the current status of Thai women in education and literacy, identifies problems, and describes literacy programs for women. Problems include limited access to primary education for disadvantaged children, lower rate of progression to secondary education, inadequate opportunities for continuing education, and tradition-oriented choice of studies. Current programs include those for school-aged girls, such as those at the Hill Area Education Center, education for street children, and distance education through a radio station. A compulsory mass campaign was launched in 1940 and lasted only three years because of cost. Subsequent campaigns succeeded in reaching hard core illiterates, but it was recognized that literacy gains in short periods of time would be short-lived. Continuing education programs include equivalency functional education and vocational training. Systematic attempts to enrich the literate environment include village reading centers, a nationwide library system, and a reading promotion campaign.

MOORE, BARBARA. (1992). Women and literacy development in the South Pacific region. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 116–147). Linkoping, Sweden: Linkoping University.

Reports on the status of literacy among women in 11 areas of the South Pacific. Although there are variations among and within different countries, there is a common theme of subservience of women brought about by tradition and religious customs. Ever since the arrival of missionaries in this region in the 19th century, literacy has been used as a means of education. Mission schools were opened on many islands and run by pastors who were residents who had been trained by missionaries. Investment in education is high, but for many it is not developing the powerful literacy necessary for full participation in a changing world. Classes are large, and books are scarce. Literacy rates appear high because of the ways they are assessed: by school attendance for 4 years or on census data in which people stated if they were literate. Although women are playing important roles outside the home, many others are facing hardships. Organizations that help with literacy development for women in the South Pacific are discussed.

GAMAL EL-DIN, NADIA. (1992). Illiterate rural women in Egypt. Their educational needs and problems. A case study. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 148–159). Linkoping, Sweden: Linkoping University.

Documents higher illiteracy rates among females than among males and in rural than in urban areas as well as an astronomical number of illiterates of both sexes and in both areas in Egypt. About 76.4% of rural women in Egypt cannot read or write. Through a case study approach, the researcher interviewed rural women to determine why girls did not go to school or why they had not finished their education and what they thought they needed to learn. Those who had not gone to school stated that their mothers wanted them to stay home, that birth certificates had been lost or destroyed, and that there was no way to get to school. They did not feel that they lost much if they did not go to school. Those who quit school did not see rewards for attending and considered school life frustrating, tiring, and boring. They thought they needed to learn reading and writing, but not math. Their responses revealed their unawareness of their right to an education and of their other roles in life. The problems of women reflect problems of society as a whole. Many government efforts have been made to overcome this problem: expansion of formal education for children, laws concerning literacy, and declarations from the Egyptian president and the People's Assembly of Egypt concerning the eradication of illiteracy in the 1990's.

Motlotle, Kgomotso Dinaame. (1992). Women and literacy development in Botswana. Some implementation strategies. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 160–186). Linkoping, Sweden: Linkoping University.

Makes suggestions for the reorganization of the literacy program in Botswana to keep pace with changing societal expectations. The implementation process lies with the Non-Formal Education of the Ministry of Education with the help of other departments that have no clear-cut policy as to how they can implement the program. There are no reliable statistics on the extent of illiteracy in Botswana, although estimates of 250,000 have been made. It was suggested that the country needs an active mobilization of current resources and reorganization in the central offices to include all ministries with similar programs. The question of illiteracy among women has not yet gained much attention as literacy provisions cut across both sexes and all ages. A model was included for providing basic literacy skills that would be linked to formal schooling, employment opportunity, and general development process of individuals.

Rusimbi, Mary. (1992). Women and literacy development in East Africa with particular reference to Tanzania. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 187–222). Linkoping, Sweden: Linkoping University.

Examines literacy initiatives as they relate to East Africa (Kenya, Tanzania, Uganda). Lack of literacy skills for both sexes was recognized from the first days of independence, because earlier programs that promoted literacy were considered by colonialists to be subversive. The discussion includes obstacles faced by women in gaining access to literacy programs, the content of the training, mobility from one level of literacy to another, support systems, and links between governmental and nongovernmental programs in training women. Historical backgrounds are given for each country. Mass literacy campaigns were made in the 1970's, but these national policies were politically motivated. Curricula, methods, and materials were planned by men, with women's contributions being minimal. Benefits from literacy instruction have been felt by only a limited number of East African women.

Veloso, Teresa. (1992). Women and literacy development in Mozambique. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 223–246). Linkoping, Sweden: Linkoping University.

Details the literacy situation in Mozambique since its independence in 1975, at which time 93% of the population was illiterate. By 1980 the rate was 73%. In 1980, 59% of the men and 85% of the women were illiterate. Women joined literacy classes in greater numbers, but the drop-out rate was much higher for women. The literacy campaigns of the 1980s did not benefit women. Problems for women included location of the centers, timetables, the literacy activities calendar, and work at home. Language was also a problem for many because they didn't speak Portuguese, the language used in literacy instruction. They speak one or more of the 20 Mozambican Bantu languages. During the past 20 years literacy programs at places of work have been useful for many workers. There are enough literacy materials in Portuguese, but they are of poor quality. Some churches have been active in organizing literacy centers. With only 45% of the school age population in school, adult education is not a priority.

TSOSANE, MASEABATA E., & MARKS, JOHN A. (1992). Women and literacy development. A Zimbabwean perspective. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 247–277). Linkoping, Sweden: Linkoping University.

Asks why the majority of adult literacy learners in Zimbabwe are women. When the country gained its independence in 1980 it was estimated that there were between 1.9 and 2.5 million adult illiterates there. Of these, two thirds were women, with nearly three quarters living in rural areas. The first national literacy campaign, sponsored by the government, was between 1982 and 1988. In 1982 about 3,000 tutors were recruited, and 30,000 learners enrolled. Cooperation among African women led to the formation of women's cooperatives that supported and actively encouraged literacy development. There is no evidence that the cooperatives ran the classes exclusively for women, but men excluded themselves by traditional attitudes. Illiteracy has fallen off dramatically in the younger age groups compared to the older, but the difference between the female age groups is much more pronounced than for the males. The rural areas are significantly educationally disadvantaged compared to the urban areas, with the most disadvantaged being the rural female.

OPPENHEIM, GERALDINE NOVELO. (1992). Women and literacy development in Mexico. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 278–290). Linkoping, Sweden: Linkoping University.

Details the educational and sociological situations as well as various plans and attempts to eradicate illiteracy in Mexico. Illiteracy continues to be a problem, especially for women, whose illiteracy rates are almost unchanged, although literacy campaigns have had greater coverage for the female population. Mexico's attempts to reduce illiteracy rates have persisted throughout this century through laws, establishment of schools, establishment of the Literacy and Extracurricular Education Directorate, campaigns, Basic Education Centers for Adults, and a National Literacy Program. The National Institute for Adult Education, founded in 1981, has promoted literacy through four main programs: literacy teaching, basic education, cultural promotion, and labor training. It has carried out research, designed educational models, prepared materials for the needs of children ages 10–14, and provided special literacy and postliteracy programs. It has disseminated information about the problems of illiteracy in order to create a greater awareness of the importance of taking part in literacy programs. Follow-up procedures are carried out on a national scale to evaluate the program.

ROSEMBERG, FÚLVIA. (1992). Gender subordination and literacy in Brazil. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 302–337). Linkoping, Sweden: Linkoping University.

Argues that the solution to the problem of illiteracy in Brazil centers around the improvement of teacher competency. Included are excerpts from a teacher who taught Mimbo (black) people and told how she spent her time teaching. In Brazil men and women share equivalent educational opportunities. Factors other than sex influence these opportunities: social class, urban or rural dwellings, region of birth, and race. Elementary school teaching is a major female job, almost always carried out in adverse conditions. Organized sectors of society, such as women's groups, unions, adult literacy, and the government have not ascribed priority to adult women's literacy. Chances for becoming literate are almost the same for both sexes. A gradual, slow decrease in illiteracy rates has been followed by a steady growth in the actual numbers of illiterates. The increase in numbers is due largely to the numbers of children being left out of school or through low productivity of teaching. Rural teachers have often attended school only 3.5 years and have not finished elementary school. The National Plan for Literacy and Citizenship, incorporated by the government in 1990, aims to reduce illiteracy by 70% by 1994.

HUSSAIN, NEELAM. (1992). Women and literacy development in Pakistan. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 62–88). Linkoping, Sweden: Linkoping University.

Analyzes the slow progress in literacy eradication in Pakistan. Differences in literacy are found between rural and urban communities, males and females, and among those in the four provinces. Only about 50% of school-age children are enrolled in primary schools; about half of them will drop out before acquiring literacy. Various schemes have been advocated and tried to alleviate the problem with adults. Female literacy ratios here are among the lowest in the world, as women have been excluded from economic, political, and social power and educational opportunities. Far less value is attached to education for girls. Males have a disproportionately higher number of institutions at all educational levels than females. Disparities between the two sexes have widened in recent years. Numerous recommendations have been made to correct or alleviate the problems related to the education of girls and women. Since 1989, the changing political climate has affected literacy efforts. A tentative policy was drafted, but the present government has been in office a very short time; it is too early to predict the results of the proposed new program.

ZUNIGAN, MIRYAN. (1992). A post-literacy project with the women of the Indian community of San Lorenzo, Colombia. In Eve Malmquist (Ed.), *Women and literacy development in the Third World* (pp. 291–301). Linkoping, Sweden: Linkoping University.

Presents a model of a post-literacy program based upon the concept of sustained health, which articulated group production of food, nutrition as a source of health, development of gender identity, and the improvement of the quality of life. The model was based upon curriculum flexibility, participation of women, sociocultural relevance, dialogue, and interaction of knowledge and experience. Massive literacy campaigns have been conducted in Colombia, especially during the 1980s. Included in the report is a self-reported story by Carmelina, an adult Indian, who told about her activities and practical information she learned in workshops. It was concluded that literacy and adult education programs based on themes of health and production were meaningful to women and contributed to community development in Colombia.

III-9 History of literacy

HARRIS, VIOLET J. (1992, Autumn). African-American conceptions of literacy: A historical perspective. *Theory Into Practice, 31*, 276–286.

Examines conceptions of literacy held by African Americans between 1700 and 1992. These are discussed in terms of broad historical periods: 1700–1799, 1800–1859, 1860–1899, 1900–1939, and 1940–1992. Although the views presented belong to those who had acquired varying degrees of literacy, they seemed to be representative of many African Americans. In each period both the accomplishments and problems in acquiring literacy are documented. Included are the names of men and women who succeeded as the first African Americans to accomplish noteworthy goals; the influence of outside forces, such as the invention of the cotton gin; the efforts of African Americans to achieve literacy for themselves and others; and the advances made in the number of people becoming literate. This historical development of literacy among African Americans was based largely on their own writings and biographies about them.

III-10 Newspaper publication

BUSTERNA, JOHN C.; HANSEN, KATHLEEN A.; & WARD, JEAN. (1991, Winter). Competition, ownership, newsroom and library resources in large newspapers. *Journalism Quarterly, 68*, 729–739.

Compares 105 metropolitan competitive, monopoly joint operating, chain, and independent newspapers on different newsroom variables, including news library resources and their relation to content performance. The major variables were size of news and library staffs, number of wire services, number of databases taken, and monthly search costs. Information was gained from two printed sources about circulation, ownership, competition, population and community characteristics, and news wire totals. In addition, a 92-item telephone questionnaire was administered to a head news library staff member at each newspaper. Multiple regression models were used to test the data. Results showed that, for papers with circulation over 100,000, the various competitive conditions and chain ownership had no significant impact on the resource measures.

UNDERWOOD, DOUG, & STAMM, KEITH. (1992, Summer). Balancing business with journalism: Newsroom policies at 12 West Coast newspapers. *Journalism Quarterly, 69*, 301–317.

Surveys 429 journalists at 12 different daily newspapers in California, Idaho, and Washington to determine changes in policy and which policies are perceived as receiving the most emphasis. The newspapers represented a range in size and ownership arrangements. In a final questionnaire, staffers indicated on a 5-point scale the degree of emphasis of each of seven policy statements received. The two policy areas that stood out most strongly were those changes moving to more aggressive management and a market-oriented, reader-friendly journalism. The journalists also saw newspapers stressing time-honored journalistic values. At both chain and family newspapers, traditional news values received stronger emphasis than any business-oriented policy except that of treating readers as customers. Chain newspapers emphasized the profit motive more than family newspapers. Subjects indicated that the balance between business and journalism has been skewed in favor of business. There were some indications that more emphasis on business principles did not always come at the expense of good journalism.

MORTON, LINDA P., & WARREN, JOHN. (1992, Winter). Proximity: Localization vs. distance in PR news releases. *Journalism Quarterly, 69*, 1023–1028.

Questions whether the proximity of the public relations release source or the localization of the facts in the news story results in more use of the release in newspapers. In the study, 1,774 copies of 23 releases were distributed to 121 Mississippi newspapers, with 174 other releases being partially rewritten to localize parts for specific newspapers. Actual geographic distance or distance coded on a 5-point ordinal scale was used as a covariate. Pearson coefficients and MANOVA were used to analyze the data. The influence of proximity proved to be slight, but localization of stories resulted in relatively higher use.

LASORSA, DOMINIC L. (1991, Spring/Summer). Effects of newspaper competition on public opinion diversity. *Journalism Quarterly, 68*, 38–47.

Compares the diversity of opinions on public issues held by individuals in communities that have newspaper competition versus individuals in noncompetitive newspaper communities. The study controlled for socioeconomic status, population density, and racial and ethnic mix in 92 counties. Data were taken from a U.S. election study in November 1988. The mean number of respondents per county was 22. Socioeconomic status accounted for 13% of the variance in diversity of opinions reflected. Newspaper competition accounted for 4%, a smaller but significant amount; population density accounted for 6%. It was concluded that newspaper competition is important for encouraging diversity of views on public issues.

Meyer, Philip, & Arant, Morgan David. (1992, Summer). Use of an electronic database to evaluate newspaper editorial quality. *Journalism Quarterly, 69*, 447–454.

Uses an electronic database to evaluate the editing precision of 58 news organizations (newspapers, newspaper combinations, and the Associated Press) and compares their ratings to their Pulitzer Prize records. Selected were one test of grammar, one of spelling, and two of style, each capable of being searched in DataTimes and VU/TEXT. The main finding was that these news organizations were good in spelling, style, and grammar. The search yielded that large news organizations were ranked by quality of editing, based on average standardized scores. Pulitzer Prizes for each newspaper were counted for a 25-year period. A comparison was made between the top 10 news organizations in editing precision and the top 10 Pulitzer winners. A nonlinear relation was found. Editing precision correlated positively with winning a small number of Pulitzer Prizes, but the effect diminished with additional Pulitzer Prizes.

Lule, Jack. (1991, Spring/Summer). Roots of the space race: Sputnik and the language of U.S. news in 1957. *Journalism Quarterly, 68*, 76–86.

Studies language used by three U.S. metropolitan newspapers about Sputnik. News reports and editorials from the first four weeks of Sputnik's flight in 1957 were analyzed using a qualitative approach. Descriptions of people and their roles and the choice of verbs and qualifiers were noted. These were categorized under three headings: defeat, mortification, and dream and dread. The reports saw Sputnik as a significant setback for the United States, a sign that something had gone wrong and that a dream had turned into a nightmare. It was concluded that a language of reaction and its interpretation were more significant than Sputnik itself.

Lee, Mary Bessie. (1992). A study of two Philippine national broadsheets' policies, content, and their readers' attitudes toward the U.S. military bases. *Gazette, 49*, 241–245.

Asks how two Philippine newspapers developed policies on the U.S. military bases issue, whether coverage conformed to these policies, and whether readers' attitudes were consistent with those of the paper they read. Interviews were conducted with key informants who were working on the papers about the policies, and questionnaires were completed by 50 readers of each newspaper. The content analysis of 72 issues per newspaper had the following variables: type of article, significance, treatment, themes, and source. Owners played a decisive role in establishing traditions that determined how the newspaper operated. Each newspaper promoted a different view of the U.S. bases. The results of the test of proportions showed significant differences between percentages of favorable and unfavorable articles but no differences for neutral articles. A significant difference was found between the readers of the two newspapers regarding support for the bases. The readers tended to have attitudes consistent with those of the newspaper they read.

III-11 History of newspapers and magazines

Caudill, Edward. (1992, Winter). E.L. Godkin and his (special and influential) view of 19th century journalism. *Journalism Quarterly, 69*, 1039–1049.

Explores the attitude toward journalism of E.L. Godkin, the influential editor of the *Nation* (1865–1899) and the New York *Evening Post* (1881–1899). His concept of journalism was complex. He saw journalism as having power to affect change for the public good, but he also saw pandering of journalists to popular audiences. He wished to change society and earn money, but he criticized editors and reporters for ignorance, errors, and sensationalism. His criticism of the press was due to several factors, including his critical nature and elitism. His distrust of the general public was related to his criticism of the press. His writings about libel caused him to be arrested and sued several times. He defended freedom of expression and the role of the press in democracy.

Bytwerk, Randall L. (1992, Winter). The dolt laughs: Satirical publications under Hitler and Honecker. *Journalism Quarterly, 69*, 1029–1038.

Compares the humor in *Die Brennessel*, published in Germany in the 1930s, with that in *Eulenspiegel*, published in former East Germany in the 1980s. Neither published much that would be considered humorous today. They were most similar in the ways they used satire to comment on international events. The governments controlled what could be said about other nations and insisted that all publications support the official line. As a result, the international satire in both periodicals was predictable, repetitious, and dull. Neither said anything critical of its allies. The publications took different approaches to domestic matters at home. The early periodical rejected any domestic criticism; the later one allowed more room for criticism than any other leading periodical. Its pages were filled with complaints, such as miserable food at railroad stations. Cartoons depicted some complaints. Neither tolerated criticism of their countries from abroad. The early magazine failed when people refused to support it; the later one sold issue after issue. After the collapse of East Germany, the magazine dropped satire and began publishing genuinely humorous material.

III-12 Book publication

Monmonier, Mark, & Schnell, George A. (1992, Fall). Geographic concentration and regional trends in the book publishing industry, 1963–1987. *Publishing Research Quarterly, 8*, 62–71.

Examines geographic changes in book publishing over the past three decades, emphasizing trends in number of book publishing firms, number of employees, and value added in the manufacturing process. Principal data were found in the *Census of Manufactures* for 1963, 1972, 1982, and 1987. The changes were examined at three levels: division, state, and county. Book publication became more decentralized when New York's percentage of industry employment declined from 38% in 1963 to 31% in 1987. However, the book publishing industry has maintained a high concentration of activity in and around New York City. The industry is becoming more dispersed, with growth in a number of regional centers. The availability of capital and the presence of experts in New York City seem likely to sustain publishing there indefinitely.

Babu, B. Ramesh. (1992). User preferences for indexes in philosophical books: A survey. *Library Review, 41*, 47–55.

Elicits the opinions of 129 subjects about the provision and adequacy of indexes in philosophical books that are used in a university in India. The results showed a strong tendency toward the need for outside guidance to help index users. The majority (61.7%) felt that English words and words that have been transliterated into English should be presented in separate sequences. In addition, 71% of the subjects thought that an index should include footnotes, illustrations, and diagrams as well as the text. More than half of the subjects (55.8%) preferred that the index be compiled by a professional indexer in consultation with the author. A single sequence of an index was preferred by 54% of the subjects. In rating adequacy of indexes, 60% rated Indian books with adequate indexes, followed by 55.8% for British books and 51.5% for U.S. books.

Minowa, Shigeo. (1990). *Book publishing in a societal context: Japan and the West.* Buffalo, NY: Prometheus Books.

Studies the relation between book publishing and social development. In the first five chapters, the book attempts to analyze interactions between the publishing field and society. The first chapter begins with data that analyze the steep rise in the yearly number of new titles published, an occurrence often seen during the modernization process of developed nations. Factors considered accountable for this phenomenon included economic development, technological conditions, the growth of scientific activities, and the spread of education. The second chapter focuses on the decline in prices of books worldwide that led to greater access to publications. Economic access to books in each of 36 countries is compared in a third chapter. The fourth chapter compares the proportion of national income expended for the book industry in 16 countries. The influence and implications of publishing technology and its role in book publishing in Japan is dealt with next. The final two chapters examine production aspects of Japanese scientific books and analyze print media in Japan.

Hayward, Pat. (1992, August). The trend towards self-publishing. *Canadian Library Journal, 49*, 287–293.

Reviews research and expert opinion concerning self-publishing. Authors are considering self-publishing options for many reasons. Self-publishing may be a last resort for some authors. Others may be convinced they can do a better job of producing the book than a publisher could. Some want control over the appearance of the book, the timing of its production and release, and the length of time the books may remain in print. Various estimates have been given for the success of marketing self-published books; none of the estimates has been high. Some kinds of books, mainly specialized ones, are easier to self-publish successfully than others. Self-published books have the reputation of not being well edited, which makes many libraries reluctant to purchase them. The greatest frustration faced by self-publishers occurs when they try to sell their books. Other difficulties include getting their books reviewed and pricing their books. Caution is expressed about variety presses.

III-13 Juvenile books and textbooks

Hamilton, Muriel E. (1992, Summer/Fall). Canadian literature in the Alberta curriculum. *Reflections on Canadian Literacy, 10*, 155–158.

Shows the emergence of Canadian literature written by and about Canadians in Canadian textbooks. Prior to 1911 there did not seem to be a felt need to include much literature written by Canadians. Early reading texts were very British in content. More Canadian literature, especially poetry, was added to the textbooks beginning in the 1930s. The content of different textbooks is discussed in regard to nationalities of the authors. The Writers' Union of Canada and the Writers' Development Trust have prepared comprehensive guides to Canadian literature: novels, short stories, poetry, film, and nonfiction. These annotated

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bibliographies, compiled by classroom teachers, were in wide use in the late 1960s and 1970s but have not been kept up-to-date.

III-14 Censorship and freedom of the press

BURRESS, LEE. (1989). *Battle of the books: Literary censorship in the public schools, 1950–1985*. London: Scarecrow Press.

Traces censorship cases in U.S. public schools between 1950 and 1985. The first chapter of the book begins with a brief case study of censorship occurring in Montello, Wisconsin, in the late 1970s and early 1980s. Other chapters report surveys of regional differences in the frequency of incidences of censorship pressures on the schools, with the northeastern part of the United States having the highest incidence of such occurrences. Twelve changes in U.S. society and schools are suggested as accounting for the growth of censorship pressures on literature texts in the public schools. Included among these are changes in the literature curriculum, the paperback revolution, the increasing number of students, the increasing cost of education, and mistakes made by the schools. Another chapter deals with censorship by publishers. The author concludes with a note that censorship during the years covered has been on the increase and that a continuation of that increase appears to be in our future.

SCHRADER, ALVIN M. (1992, February). A study of community censorship pressures on Canadian public libraries. *Canadian Library Journal, 49*, 29–38.

Surveys all autonomous Canadian public libraries (1,000, with 56% responding) about censorship pressures and responses librarians made to these pressures. The results of the questionnaires showed that over the 3-year period studied (1985–1987), nearly 500 books were challenged, most frequently for reasons of sexual explicitness, nudity, unsuitability for age group, or violence. In 16% of the challenges (99 incidents) the offending title was withdrawn from the collection. Many complaints were resolved on the day the complaint was made. In some cases, books were placed in other sections of the library. Borrowing was restricted by age or required parental approval for 39% of the titles. Some libraries restricted access to specific titles. At least one direct challenge occurred every day somewhere in Canada during the three years. The local media reported only 24 challenges (4% of all incidents).

KENNEDY, WILLIAM V. (1993). *The military and the media: Why the press cannot be trusted to cover a war*. Westport, CT: Praeger.

Argues that during the period leading up to the Persian Gulf War of 1990–1991 and throughout the war itself, the U.S. government succeeded in controlling what the public would be allowed to know about the conduct of military operations. It is contended that the control occurred because the press was arrogant and smug and was operating 20th and 21st century technology with outmoded concepts of organization, training, and management. The press, it is argued, failed to recognize and understand essential facts already in the public domain because of inadequacies in its own training and organization. Chapter 1 describes how the military has gained control of press coverage. In chapters 2–6 the author discusses the structural defects leading to the disastrous Vietnam press coverage that existed even before U.S. forces became engaged in Southeast Asia and that were apparent in every major military news story up to that time. Chapter 7 discusses what went wrong in Vietnam and how that led to the total government management of the press in Grenada, Panama, and the Persian Gulf. Chapter 9 discusses the establishment of a "right to lie" as official government policy during the Kennedy administration. A final chapter describes what might be done if owners of the nation's major news media were forced to address the problem by an aroused citizenry.

GUNTHER, ALBERT C., & SNYDER, LESLIE B. (1992, Autumn). Reading international news in a censored press environment. *Journalism Quarterly, 69*, 591–599.

Compares the critical reading of people from two countries (the United States and Indonesia) that have different degrees of censorship. Compared are people who perceive many news constraints within their own countries and those who perceive few constraints. Subjects were 227 U.S. undergraduates and 106 Indonesian university students. All subjects read a story attributed either to the Associated Press or Tass. Critical reading evaluation (bias, accuracy, trustworthiness, attributing story to writer or event) and issue involvement were measured on 7-point scales. Subjects' perceptions concerning news restrictions in several countries, including their own, were questioned. The study used a 2 x 2 design, with news environment (nation) as a field variable and apparent news constraint (story source) as a manipulated variable. The findings showed that subjects in censored news environments were more critical in distinguishing among news sources but less critical of the unconstrained news itself. In Indonesia perceived constraint had no relation to critical reading of the news story. In the United States perceptions of low news constraints were related to accuracy, trustworthiness, and less bias.

III-15 Effects of reading

SPENCER, J. WILLIAM; SEYDLITZ, RUTH; LASKA, SHIRLEY; & TRICHE, ELIZABETH. (1992, June). The different influences of a natural hazard on response behavior. *Communication Research, 19*, 299–325.

Examines the public's responses to newspaper and television reports of an impending natural hazard that threatened local water supplies. A conceptual model was developed that showed that characteristics of the two media might differentially affect response behavior. Information for measuring the dependent variable, the public's responses, came from the records of daily wholesale sales of bottled water between June 17 and August 14. The records came from a water company with the single largest market in the city where the hazard occurred. Five independent variables were used, based on reports from a television station and a morning newspaper: hazard-related topics, personal relevance of the topics, proximity, visual aids, and degree of ambiguity of media reports. Hazard-related topics were coded as either consequences or responses. Multiple regression was used to analyze the effect of the media topics on changes in sales of bottled water. Seven regression equations were used for each topic. Strong support was found to suggest that different aspects of reports in the two media affect response behavior as measured by the sale of bottled water.

HORNIG, SUSANNA. (1992, Autumn). Framing risk: Audience and reader factors. *Journalism Quarterly, 69*, 679–690.

Asks how lay readers respond to the risk implicit in news stories about science and technology. Sixteen open-ended interviews were conducted with college students to assess reactions to one of four fictional news stories about hypothetical developments in energy technology, artificial intelligence, medicine, and agriculture. From these interviews a series of 93 five-point Likert-like scale items were administered to 40 undergraduate journalism majors. Factor analysis was performed to identify dimensions that might contribute to differences among subjects in assessments of risk. Four items that loaded most heavily on the four identified factors were presented in the second phase of the study to a new group of 97 subjects to assess their pre-existing attitudes to one of the four original stories. Subjects completed a questionnaire then read their story and responded to two questions calling for global assessments of risk and benefit as assessed by a 7-point Likert-like scale. Two stepwise regression analyses were performed. The four factors that emerged were that science and technology are expensive and risky (rationalist factor), can have negative effects (effects factor), can be associated with control (control factor), and can be misused (utilization factor). The story control index was found to be the best predictor of both risk and benefit.

Weaver, David H.; Zhu, Jian-Hua; & Willnat, Lars. (1992, Winter). Interpersonal communication and the agenda-setting process. *Journalism Quarterly, 69*, 856–867.

Explores kinds of information that lead to whether a problem, such as drug abuse, is perceived as a personal or social problem. Three sources of information about drug abuse were examined: people's personal experiences, experiences of friends and acquaintances, and mass media. Content analysis of newspaper coverage was coupled with survey data from 734 adults. Subjects were asked questions about their exposure to television and newspaper drug stories and about their or their friends' use of drugs. Personal experience did not significantly predict concern over drug abuse as either a personal or a social problem. Mass media coverage did not contribute to perceptions of drug abuse both at the social and personal level, but newspaper coverage significantly predicted perceptions of drug abuse as a personal problem. Interpersonally communicated information played a significant role in perceptions of the drug abuse issue at both the social and personal levels.

Perloff, Richard M. (1991, Winter). Effects of an AIDS communication campaign. *Journalism Quarterly, 68*, 638–643.

Reports the results of an AIDS information campaign directed at intravenous drug users and their partners. AIDS and IV drug-use messages were distributed through different communication channels (brochures, pamphlets, comic books, and billboards) and through news coverage in one U.S. city in Ohio. One week was declared for drugs and AIDS awareness during which telephone interviews were conducted in the target center with 197 inner-city residents and 205 similar subjects in a control city. All questions were answered by "yes" or "no." The campaign provided greater awareness in the target city than in the control city about the project and about AIDS as an important problem. However, the campaign did not significantly increase knowledge of AIDS etiology and prevention.

Cohen, Jeremy, & Davis, Robert G. (1991, Winter). Third-person effects and the differential impact in negative political advertising. *Journalism Quarterly, 68*, 680–688.

Explores reactions to negative political advertising. The 95 undergraduate subjects were shown two negative political advertisements 1 week before the 1988 U.S. presidential campaign. Each presidential candidate was attacked in one of the ads. Subjects completed a questionnaire after they viewed the ads. Subjects classified themselves as Bush supporters, Dukakis supporters, or neither. The two independent variables were candidate preference, a between-subjects factor, and location of perceived impact (self versus others who support the attacked candidate), a within-subjects factor. Dukakis supporters were compared to Bush supporters: those who supported neither candidate were compared with those who opposed the candidate under attack. Data were analyzed using multivariate repeated measures and ANOVA with sequential sums of squares. The results showed that those who supported the candidate who was attacked in the ad saw other supporters more negatively influenced by it. Those who opposed the candidate perceived themselves to be more affected than those who supported the candidate.

JAFFE, LYNN J.; JAMIESON, LINDA F.; & BERGER, PAUL D. (1992, May–June). Impact of comprehension, positioning, and segmentation on advertising response. *Journal of Advertising Research, 32*, 24–33.

Explores how the degree of comprehension of an ad's positioning will affect responses to advertising. The positionings were modern versus traditional female role portrayals; products being advertised were financial services. The 200 women subjects, ages 25–49, were interviewed in four shopping mall locations. Dependent variables were information interest and purchase probability. Independent within-subject variables were positioning (modern and traditional female role portrayals), execution, product, and institution. The two between-subject factors were comprehension and sex-role identity. Each subject viewed several ads, each with a different combination of within-subject factors. Subjects indicated their advertising response and their comprehension of each ad and completed a sex-role inventory. To determine comprehension, subjects indicated which printed descriptions of the products were accurate or inaccurate. It was concluded that an ad's positioning has a real and measurable impact on advertising response. On the average, the modern positioning brought about a higher advertising response than the traditional one.

III-16 Reaction to print

LAIN, LAURENCE B., & HARWOOD, PHILIP J. (1992, Summer). Mug shots and reading attitudes toward people in the news. *Journalism Quarterly, 69*, 293–300.

Questions whether readers' reactions to a news story are influenced by the nature of an accompanying photograph of the face of a criminal or suspect. The 555 college student subjects were given one of four versions of a 200-word news story that was neutral in approach. Three of the versions were accompanied by a different mug shot of the same man that was positive, negative, or neutral in appearance. The fourth version was the mug shot alone. Subjects responded to 14 semantic differential pairs and a few demographic questions after reading the story. They evaluated how the story subject was portrayed on a 7-point scale for each pair. No references were made to the photograph. Analysis of variance was used to test mean differences. Significant differences were found in the personal attributes ascribed by readers to the source of the news story, especially of the source's congeniality and integrity; credibility was less affected. Women generally responded less favorably than men toward the source. Readers considered a source more congenial when the story was accompanied by a photo.

WHITE, H. ALLEN, & ANDSAGER, JULIE L. (1991, Winter). Newspaper column readers' gender bias: Perceived interest and credibility. *Journalism Quarterly, 68*, 709–718.

Tests the effects of gender on the perceived credibility of a newspaper columnist and on subjects' interest in a newspaper columnist's writing. Each of 305 college student subjects was randomly assigned to one of 12 experimental conditions: four writer conditions (female, male, ambiguously identified, or not identified) with three topics (female, male, or neutral issues). Subjects responded to items that were designed to evaluate the column and writer after reading the assignment. Semantic differential items were used to evaluate the credibility of the writer and effectiveness of the column. The results of factor analysis and analysis of variance showed that subjects evaluated same-gender journalists and their writing more highly than they evaluated opposite-gender journalists and their writing. No differences were found in levels of credibility between male and female writers regardless of reader gender. The topic of the column had no effect on perceived credibility of the writer or the perceived interest level of the column.

SALWEN, MICHAEL B., & MATERA, FRANCES R. (1992, Autumn). Public salience of foreign nations. *Journalism Quarterly*, *69*, 623–632.

Relates media coverage of foreign news to how people think about the different countries in the news. A content analysis was conducted of foreign news reported for nine weeks in the *New York Times*, the Miami *Herald*, and evening news broadcasts by three networks. Then, between May 1 and May 4, 1989, members of a random sample of 629 residents in Dade County, Florida, were contacted by telephone (79% response rate) to answer four questions about the countries that had been in the news. An attempt was made to link the way in which foreign nations were reported and the way in which they were evaluated by the public. The content analysis resulted in 613 network news stories and 991 newspaper stories printed in the first three pages of each newspaper. Spearman rho rank order correlation was used. Cumulative coefficients over time showed that the amount of news coverage devoted to various nations was accurately perceived. The coverage did not influence public assessments of foreign nations as friends or enemies of the United States.

AKHAVAN-MAJID, ROYA; RIFE, ANITA; & GOPINATH, SHEILA. (1991, Spring/Summer). Chain ownership and editorial independence: A case study of Gannett newspapers. *Journalism Quarterly*, *68*, 59–66.

Compares editorial positions taken on three controversial public issues by 56 newspapers in the Gannett chain with a matched group of 155 other newspapers. Editors from both groups gave their editorial positions about each issue in mailed questionnaires. The editorial positions taken by the Gannett papers showed a high level of homogeneity within the chain; significant differences were found between the two groups. The Gannett papers were significantly more likely to carry editorials on each issue than the other newspapers. The Gannett papers showed a consistent pattern of opposition across all three issues while the non-Gannett papers were far less consistent.

NOLAN, JACK. (1991, Spring/Summer). Effects of cueing familiar and unfamiliar acronyms in newspaper stories, an experiment. *Journalism Quarterly*, *68*, 188–194.

Focuses on the use of acronyms and conditions under which they are understood. The independent variables were familiarity or unfamiliarity of acronyms, initial cueing of acronyms, and the reader's need for cognition. Recognition of the acronym was the independent variable. The 119 undergraduate students read one of five news stories that was about 250 words long. The control story contained no acronyms. Two stories contained cued acronyms, either familiar or unfamiliar; the other two contained uncued ones, familiar or unfamiliar. ANOVA tested the four experimental versions. Need for cognition was measured by the results of the 18-item need-for-cognition scale. Recognition was measured by an index that included recall and meaning of the acronyms. It was found that two characteristics of readers determined the communicative success of acronyms: reader familiarity with acronyms, and reader need for cognition. It was not considered important to cue readers to meaning in order for them to recognize acronyms.

III-17 History of books and print

SYEBOLD, CATHARINE. (1992, April). The beginnings of the University of Chicago Press. *Scholarly Publishing*, *23*, 178–184.

Describes the problems involved in the founding of the University of Chicago Press and its successes. The press began to issue journals and books as well as official university announcements when the university opened its doors in 1892. William Rainey Harper, the first president, recognized the value of publication and until his death in 1906 maintained a personal interest in the press and its printing operations. Early problems were inadequate space, several moves, criticism from faculty and trustees, ownership, and modifications in its organization. In the beginning its primary function was to produce and disseminate the results of scholarly research. It was also mandated to operate a printing plant, print and distribute university literature, and run the university bookstore. Currently, after 100 years, it is the largest U.S. university press, with over 3,000 titles in print, 45 journals, and a yearly output of between 200 and 300 books. Its international reputation had fulfilled Harper's promise that the establishment of the press was "no foolish dream or idle vision."

PETERS, JEAN. (1992, Fall). Book industry statistics from the R.R. Bowker Company. *Publishing Research Quarterly, 8*, 12–23.

Presents compiling and publishing statistics of the book industry by R.R. Bowker Company for more than a century. The company began operation in 1872 as the publisher of a weekly magazine for the book industry, *The Publishers' and Stationers' Weekly Trade Circular*, which became *The Publishers' Weekly*. The history of the publishing effort is reported, with details on how the collection, classification, and publication of data have evolved. Bowker provides statistics on book title output, booksellers (retail and wholesale), and libraries. This information is found in several publications, such as *Books in Print*, *Paperbound Books in Print*, *Subject Guide to Books in Print*, and *American Book Trade Directory*. Figures are included for book title production categories with Dewey Decimal Numbers, U.S. title output for 1880–1990, hardcover average per-volume prices, bookstores in the United States by types, and independent and chain booksellers (retail and wholesale).

OURGAY, METIKOU. (1992, September). Printing, publishing and book development in Ethiopia up to the era of Emperor Menelik II. *International Information & Library Review, 24*, 221–227.

Reviews book publishing in Ethiopia between 1500 and 1900. Printing of texts there dates from the 1500s, but printing technology was not introduced until 1863. The contributions of the British and Foreign Bible Society and the Church Missionary Society were notable in the early and late 19th century. During the period studied, numerous ecclesiastical and a few original works by Ethiopians and foreigners appeared in Ge'ez and other dialects. Various printing presses were introduced after 1863. The first government printing press was started in 1906. Most of the products of the press were kept either in church archives or in royal libraries. Since the establishment of any modern type library was neglected, most of the literate population had no opportunity to learn what was being published in their own country. Writings were largely of an evangelical nature. Many of the early Ethiopian publications are now in European libraries.

III-18 Research techniques

TRAHAN, ERIC. (1993, January). Applying meta-analysis to library and information science research. *Library Quarterly, 63*, 73–91.

Performs a pilot study to determine the feasibility of using meta-analytic techniques in summarizing library research literature. The question investigated was the comparative effectiveness of computerized versus paper-based retrieval systems. A total of 25 studies met the selection criteria determined by the researcher. Each study was analyzed and coded for the geographic location, the year and mode of publication, library type, outcome variables, statistics used, and search complexity. Specific steps taken were explained. The results showed that there was slight collective advantage toward paper-based searching in the studies analyzed. The differences between the two types of systems were most apparent when the searching was relatively simple and when a library catalog rather than a periodical index was used. The pilot study showed that it is both possible and advantageous to use meta-analytic methods in integrating library and information science research results. A number of factors that led to the variability in individual study results were identified successfully.

HANNABUSS, STUART. (1992). Statistics at work in the library. *Library Review, 41*, 38–48.

Examines three issues that commonly occur in libraries and demonstrates how statistical techniques can be used to answer practical questions. The three issues are overdue books and loan periods, overdues by user groups, and how often documents are used. Coefficients of correlation, chi square, and regression analysis were applied, each to a different issue. Various statistical terms applicable to the three issues are explained. Data are collected in the course of work and can be easily used. Each procedure is carefully explained using situations and terms common to libraries.

GARLAND, KATHLEEN (1992, Winter). Circulation sampling as a technique for library media program management. *School Library Media Quarterly, 20*, 73–78.

Questions whether sampling library circulation in schools can overcome the problem of time while providing a fairly accurate approximation of circulation activity. Circulation of nonfiction over short periods of time was compared with that of one school year in an elementary library media center. Stratified random samples were taken from one week in each of four grading periods. Two of the time periods were considered typical. Three- and four-day samples were taken within these weeks. Relations between each subset circulation sample and the annual circulation were measured by the Pearson product correlation coefficient. A sample of the circulation of several days correlated highly with figures collected for one school year. Random sampling of daily circulation gave the most accurate picture, but purposive sampling, also used here, over a short period of time provided a fairly accurate representation of circulation activity.

AL-EMAD, ABDULRAHMAN H. (1991, Winter). Counting items versus measuring space in content analysis. *Journalism Quarterly, 68*, 657–662.

Compares two methods of analyzing content, using the first page of five issues of eight Saudi newspapers during one week. The cumulative number of analyzed stories was 382; the total space was 3,313 column inches. Factor analysis and Pearson coefficients were used to analyze coverage of five topics. Correlation coefficients among newspapers were computed to compare the length of individual stories as items and the space measurements by categories. Coefficients of category ranks by space were stronger than item-length coefficients. When the two correlation matrices were factor analyzed, they produced different factors. Factors obtained from analysis of category rank explained more variance and were more interpretable than factors obtained by analysis of individual items.

KENNAMER, J. DAVID. (1992, Autumn). Use of "vague" quantifiers in measuring communication behaviors. *Journalism Quarterly, 69*, 646–650.

Investigates the use of vague quantifiers as related to the measurement of two communication behaviors in the United States, newspaper use and political discussion. The data came from two telephone interviews in Virginia: 324 in October 1984 and 500 in October 1988. Subjects were selected on a random basis from telephone directories. In the 1984 survey, subjects answered a question concerning their conversations about politics and public issues. Subjects responded with *often*, *sometimes*, *rarely*, or *never* and quantified their response by stating the number of times per week represented by their response. Similar questions were asked concerning reading about presidential campaigns in newspapers in 1988. The results of ANOVA showed that vague quantifiers of greater magnitude produced higher means. There were clear differences in the distributions but also considerable overlap. In neither case did the vague quantifiers seem to form an interval scale. They had different meanings for different subjects.

TIBBO, HELEN R. (1992, January–March). Abstracting across the disciplines: A content analysis of abstracts from the natural sciences, the social sciences, and the humanities with implications for abstracting standards and online information retrieval. *Library and Information Science Research, 14*, 31–56.

Selects abstracts from three disciplines and applies to them standards that were developed by two professional organizations for use in abstracting scholarly and scientific writing. A content analysis was made of 120 abstracts from chemical, psychological, and historical literature. Attention was given to the scope and purpose of the research described in the original document, methodologies, results, and conclusions. The results showed that the science and history abstracts, both author- and abstractor-generated, were quite dissimilar. Science abstracts contained a high percentage of statements related to the guidelines; history abstracts were primarily composed of conclusions and statements that did not match the categories. More than 91% of the sentences in the chemistry abstracts and more than 90% of those in psychology followed the established standards; fewer than 40% in the history abstracts did. It was concluded that one set of standards cannot describe abstracts from all subject areas.

CHOPPIN, ALAIN. (1992, July–August). The *Emmanuelle* textbook project. *Journal of Curriculum Studies, 24*, 345–356.

Describes a project, set up in 1980 in Paris, France, that aims to encompass all aspects of research into school textbooks, including production, publication, regulation, preservation, and use as source material for research. The goals of the *Emmanuelle* data bank are to record the corpus of school textbooks published in France from 1789 to the present (more than 80,000 titles and several hundred thousand editions) and to furnish a record stating where any of the books can be found. The data collected for each book comprise bibliographic variables, cataloguing information, and items specific to its nature as a text. This data bank will make it possible to plan research concerning textbooks with a view of achieving a balance over the whole country. Until now France has lacked a comprehensive history of the regulation of school textbooks. The product of this research will be a dictionary of publishers beginning in 1789. Plans are to investigate which texts were actually used and how they were used. Currently the project represents the most extensive program of research devoted to school texts in France.

IV. Physiology and psychology of reading

IV-1 Physiology of reading

DEMONET, JEAN-FRANÇOIS; CELSIS, PIERRE; NESPOULOUS, JEAN-LUC; VIALLARD, GERARD; MARC-VERGNES, JEAN-PIERRE; & RASCOL, ANDRÉ. (1992, January). Cerebral blood flow correlates of word monitoring in sentences: Influence of semantic incoherence. Aspect study in normals. *Neuropsychologia, 30*, 1–11.

Assesses the cerebral blood flow changes induced by the semantic incoherence of sentences monitored by 12 subjects. Participants were right-handed volunteers who had no history of neuropsychiatric disease. The verbal stimuli consisted of four sets of 44 sentences, each set corresponding to an experimental condition. Each experimental condition differed from the other three either by the semantic coherence versus incoherence of the sentences or by the imageability versus nonimageability of the words. Subjects' answers were noted in the course of the cerebral blood flow measurement and classified as hits and false-alarms corresponding either to distractors or other words. Regional cerebral blood flow was measured using a single photon emission tomograph and an intravenous injection of Xenon 133. During flow measurements, subjects were lying with eyes closed in a quiet room and perceived the stimuli through binaural listening via headphones connected to a tape recorder. Analysis revealed no significant cerebral blood flow changes across conditions and no interaction between coherent versus incoherent and imageable versus nonimageable conditions. However, the analysis of the interregional correlations pointed to an increase in the functional links between the hemisphere in the incoherent conditions, whatever the imageability.

BIGLER, ERIN D. (1992, October). The neurobiology and neuropsychology of adult learning disorders. *Journal of Learning Disabilities*, *25*, 488–506.

Presents a review of the area of adult learning disabilities from a neurobiological and neuropsychological perspective. Studies illustrating various possible pathophysiologic bases in dyslexia were discussed along with other neurobehavioral disorders that may coexist with learning disorders. Neuropsychological assessment methods in evaluating learning disabilities were reviewed. Test results in a case of traumatically induced dyslexia were compared to those obtained in three adults with residual developmental dyslexia. The problems associated with treatment of adult learning disorders were discussed in the context of brain plasticity and recovery of function from the perspective of a brain injury model. Finally, the basis common to neurologic factors subserving learning disability and emotional dysfunction was explored.

HUTNER, NANCY, & LIEDERMAN, JACQUELINE. (1991, November). Right hemisphere participation in reading. *Brain and Language*, *41*, 475–495.

Examines whether the right hemisphere's contribution to lexical semantic processing is greatest when it is released from inhibition. Subjects were 18 male and 15 female university undergraduates. In dual-task conditions, subjects were asked to hold six abstract words in memory while they performed a lateralized semantic or rhyme task. In addition to the dual-task conditions, there were single-task control conditions: baseline semantic, baseline rhyme, and baseline memory. The dependent variable was reaction time for correct related trials. Related trials were those in which the centrally presented target word and the laterally presented word were semantically related (semantic conditions) or phonologically related (rhyme conditions). Results supported the hypothesis that right hemisphere reading processes would be disinhibited when the left hemisphere was occupied with the memory task for a subset of subjects. Across subjects, there was a strong correlation between the degree of left hemisphere dominance in the single-task semantic conditions and the degree of disinhibition of right hemisphere function in the dual-task semantic condition.

RUMSEY, JUDITH M.; ANDREASON, PAUL; ZAMETKIN, ALAN J.; AQUINO, TRACY; KING, A. CATHERINE; HAMBURGER, SUSAN D.; PIKUS, ANITA; RAPOPORT, JUDITH L.; & COHEN, ROBERT M. (1992, May). Failure to activate the left temporoparietal cortex in dyslexia. *Archives of Neurology*, *49*, 527–534.

Tests the hypothesis of left temporoparietal dysfunction in dyslexia. Fourteen right-handed men with severe developmental dyslexia and 14 matched controls were studied. Dyslexia was defined by history and by current test evidence of deficient decoding skill, or poor word recognition and reading accuracy, relative to both general and verbal intelligence. The reading deficits could not be attributed to low IQ, disorders of spoken language, inadequate educational opportunity or sensory deficits, trauma, or neurologic disease. Controls were matched to the patients by age, sex, handedness, educational level, and Full Scale IQ. Evaluations of subjects included a semistructured intake interview, a structured psychiatric interview, psychometric testing (WAIS-R, GORT, WRAT-R), Goldman-Fristoe-Woodcock Reading of Symbols, 12 handedness items, a general physical examination, a physical neurologic examination, and audiologic assessment. Cerebral blood flow was measured with positron emission tomography in both groups at rest and during an auditory phonologic task (rhyme detection) and an auditory attention task involving the detection of target tones. A one-way repeated measures ANOVA was used to test for differences in cerebral blood flow between resting and rhyming states within each group. Results revealed that normal readers activated left temporoparietal cortex during rhyme detection but not during the nonphonologic attentional task. Dyslexic men failed to activate those left temporoparietal regions activated in controls during rhyme detection but did not differ from controls in these regions during rest or attentional testing.

MORIKAWA, KAZUNORI, & MCBEATH, MICHAEL K. (1992, June). Lateral motion bias associated with reading direction. *Vision Research, 32*, 1137–1141.

Explores possible sources of leftward motion bias in nonreading situations. Three successive experiments using the same procedures but with different samples were conducted. Experiment 1 examined handedness and cerebral lateralization as a source of bias. Subjects were 8 left-handed and 8 right-handed U.S. undergraduates. In timed trials, subjects viewed a row of 10 black diamond shapes on a white background displayed on a computer monitor. They then viewed a second identical display shifted laterally to the left, to the right, or neutrally. As expected, left shift and right shift trials produced perception of motion in the direction shifted, but neutral shift trials produced significant bias for leftward motion. These findings did not support the premise that lateral motion bias arises from handedness and cerebral lateralization. Experiment 2 examined whether or not lateral motion was learned through long term exposure to asymmetric environmental motion specific to driving on a particular side of the road. Subjects were eight bilingual Japanese right-handers who had recently arrived in the United States and who were used to driving on the left side of the road. Subjects performed nearly the same as the U.S. subjects in Experiment 1, thus refuting the premise that lateral motion bias stems from driving experience. Experiment 3 examined whether lateral motion bias arises from habitual asymmetry in direction of eye movements during reading. Subjects were eight bilingual right-handers whose first languages read from right to left, although all eight subjects read English or French fluently. A significant bias in either direction for this group was not noted, although the group did differ from all 24 left-to-right readers from the previous experiments. The premise that reading habits affect lateral motion bias was thus supported.

BUZZELLI, ANDREW R. (1991, November). Stereopsis, accommodative and vergence facility: Do they relate to dyslexia? *Optometry and Vision Science, 68*, 842–846.

Compares dyslexic and normal readers on the functions of stereopsis, accommodative, and vergence facility. Participants were 26 males, averaging 13.35 years of age. Within this group, 13 dyslexics were matched to 13 normal readers, with the diagnosis of dyslexia for the former group ruling out reading disability stemming from psycho-social, educational, or neurological causes. All subjects were tested for acuity, strabismus, stereopsis, accommodative facility, and vergence facility using well known clinical measures. Statistical comparisons of the data for each group on each measure showed that dyslexics performed significantly more slowly than the normal readers only on the vergence task.

STEIN, J.F., & FOWLER, M.S. (1993, February). Unstable binocular control in dyslexic children. *Journal of Research in Reading, 16*, 30–45.

Presents a review of research relative to the hypothesis that unstable binocular control can be a cause of children's reading difficulties. This resulted in identification of evidence supporting the authors' hypothesis: unstable binocular control is a potent and common cause of difficulty with learning to read. However, they added that binocular instability was rarely the sole cause of children's reading problems. Many dyslexic readers with binocular instability additionally had phonological difficulties. Furthermore, while correcting binocular instability may have helped children with this condition learn to read, the treatment seldom completely cured the reading disability and was no substitute for skilled remedial assistance.

FLETCHER, JAMES. (1991, November). Qualitative descriptions of error recovery patterns across reading level and sentence type: An eye movement analysis. *Journal of Learning Disabilities, 24*, 568–575.

Describes the eye movement patterns of nondisabled readers and disabled readers during the reading of sentences with three types of errors. Ten students with reading disabilities and 10 students without disability were selected from suburban Chicago schools. Students were 14–15 years of age, were of low-middle income, and were 60% male. Each student was presented with 20 one-line slides, each with three sentence types (syntactically ambiguous, semantically anomalous, and control types). Each of two types of syntactically ambiguous and semantically anomalous sentences was presented, one with an error and one control. After the sentences were presented, a written, multiple-choice comprehension question related to each sentence was presented. Seven quantitative eye movement measures comprised the dependent variables: fixation duration, postregression fixation duration, saccade length, regression length, fixation count, saccade count, and regression count. The independent variables included sentence type and reading proficiency. In addition to studying error recovery patterns, eight additional types of eye movement patterns were scored. These included unnecessary error recovery, unfixated critical words, and sentence restarts. Analysis suggested that error recovery strategies utilized by disabled and nondisabled readers were similar in frequency and pattern. Both groups displayed patterns that were organized, strategic, and efficient. Both groups displayed differences in patterns between sentences containing errors and control sentences, suggesting flexibility in use of recovery strategies. Finally, both groups had a tendency to reanalyze inconsistent regions within sentences rather than disambiguating regions.

IRWIN, DAVID E. (1991, July). Information integration across saccadic eye movements. *Cognitive Psychology, 23*, 420–456.

Examines the properties of transsaccadic integration in six experiments. The experiments investigated several aspects of the time-course of information decay in transsaccadic memory, its sensitivity to pattern displacements across fixations, and its storage capacity. Twelve subjects, including undergraduate students, graduate students, and the author, participated in the first experiment, which was designed to test the time-course of information decay in transsaccadic memory. The stimuli consisted of dot patterns constructed by randomly filling eight locations from a 4 x 4 array of locations. After the apparatus was calibrated for each subject, the random dot patterns were presented 1.7 degrees above a saccade target upon which subjects were to fixate. The pattern was erased when the saccade toward the target was initiated. After a 40–5000 msec delay, a second pattern was shown for 250 msec in the same spatial location. The subject was required to tell whether the second pattern was the same or different than the first pattern. Each subject completed 16 blocks containing 24 trials each over the period of several testing sessions. Each subject also completed two no-saccade control conditions. Results of all six experiments suggest that (1) transsaccadic memory holds schematic visual information in a long-lasting though undetailed representation, (2) this representation is not strictly tied to spatial position, and (3) transsaccadic memory has a limited capacity.

Gillis, Jacquelyn J.; Gilger, Jeffrey W.; Pennington, Bruce F.; & DeFries, John C. (1992, June). Attention deficit disorder in reading-disabled twins: Evidence for a genetic etiology. *Journal of Abnormal Child Psychology, 20*, 303–315.

Analyzes twin data to examine the genetic etiology of attention deficit hyperactivity disorder (ADHD) in a sample of reading-disabled twins. Subjects were a subset of twin pairs participating in the ongoing Colorado Reading Project for which complete behavioral information was available. At least one member of each pair met the attention deficit disorder (ADD) of the Diagnostic Interview for Children and Adolescents-Parent Interview (DICA-P). Twins ranged in age from 8 to 20 years. To assess the heritable nature of ADHD, a multiple regression model was fitted to the DICA-P scores. The basic regression model was also extended to test for differential genetic etiology as a function of age. Two additional analyses were conducted to determine the extent to which the genetic variance observed for DICA scores was due to individual differences in IQ (WISC-R or WAIS-R) or reading performance (PIAT). Results revealed that the deviant DICA-P scores were due primarily to heritable influences. ADHD appeared to be substantially heritable in both males and females, did not vary significantly as a function of age, and was highly heritable after controlling for reading performance.

Griffin, John R. (1992, February). Genetics of dyseidetic dyslexia. *Optometry and Vision Science, 69*, 148–151.

Determines if reading difficulty stemming from poor whole word coding (dyseidetic dyslexia) is an autosomal dominant trait. Nine pedigrees were constructed on the basis of subjects' (26 males and 11 females) performance on the Dyslexia Determination Test or the Adult Dyslexia Test, case history information including interviews of subjects and their family members, and evidence that the subjects were of normal intelligence and not affected by exclusionary factors. Pedigree analysis revealed findings that are consistent with a theory of autosomal dominant transmission.

Slowiaczek, Louisa M. (1991, November). Stress and context in auditory word recognition. *Journal of Psycholinguistic Research, 20*, 465–481.

Examines the nature of lexical stress effects on auditory word recognition in context. Two experiments were conducted with 24 subjects who were recruited from a paid subject file. In Experiment 1, subjects identified isolated noise patterns that obliterated the spectral cues in words to determine if subjects could identify words based on noise envelopes. Subjects were able to identify target words better than chance from information in noise envelopes alone. The results suggested that listeners can use the energy in a wave form (one of the physical correlates to lexical stress) to identify lexical items correctly. This experiment also revealed better performance when the target word was heard prior to hearing the noise pattern than when the noise pattern was presented first. The second experiment directly examined the interaction of lexical stress and contextual information by holding the sentence context and stress information constant and asking subjects to determine the appropriateness of manipulated comparison words. Results confirmed the influence of context on the recognition of spoken words. The data from Experiment 2 also indicated that listeners do use lexical stress information. In particular, when subjects evaluated stimulus types in which the context was appropriate but stress patterns differed, responses were faster and more accurate when the stress pattern was appropriate.

IV-2 Sex differences

JAMES, WILLIAM H. (1992, June). The sex ratios of dyslexic children and their sibs. *Developmental Medicine and Neurology*, *34*, 530–533.

Reanalyzes data from a previous study and summarizes other research on the sex of siblings of dyslexic children. Reviewed, too, is information contrasting the sex ratio of siblings affected with dyslexia with that of unaffected siblings. Although the evidence presented is equivocal, it suggests that boys have a greater susceptibility to dyslexia than girls and that parents of dyslexic children produce a higher proportion of boys than do parents of controls.

ANDERSON, DIANNA D., & MANY, JOYCE E. (1992). An analysis of children's responses to storybook characters in non-traditional roles. *Reading Horizons*, *33*, 95–107.

Analyzes, from a reader-response perspective, children's responses to story characters in nontraditional roles and investigates the relation of readers' gender and their responses. Subjects were 154 children between the ages of 8 and 10 from eight intact classes. Subjects were read two picture books, with each of them representing a major character in a nontraditional gender role. After each book, children were asked to write anything they wanted in response. Responses were analyzed to determine positive or negative reactions to the nontraditional roles. For cases in which the responses did not refer to gender roles, the responses were classified as either descriptive and evaluative or connecting. Chi square analysis of journal responses to *William's Doll* indicated a significant relation between gender and the categories of response; there was no significant difference, however, between males and females in the responses to *White Dynamite and Curly Kidd*. For *William's Doll*, 16% of the males compared with 9% of the females responded negatively to the nontraditional role of the main character. The majority of responses were descriptive and evaluative. For *White Dynamite*, only 23% of children mentioned the nontraditional main character role in their responses; among those, there were more positive than negative responses. Again, the majority of free responses were descriptive and evaluative. Subjects in this study seemed to view sex-equitable literature in the same way they did literature in general.

SLATE, JOHN R.; JONES, CRAIG H.; & DAWSON, PEG. (1993, April–May). Academic skills of high school students as a function of grade, gender, and academic track. *The High School Journal*, *76*, 245–251.

Examines differences in high school students' academic behaviors as a function of grade, gender, and academic track. Subjects were 305 students in grades 9 through 12. According to school criteria, students were grouped on ability into one of four academic ability tracks ranging from low to high. Students were administered the high school version of the *Study Habits Inventory* (SHI-HS), a 58-item questionnaire probing their habitual note-taking and study behaviors. Results showed that students typically used only 46% of the desired academic behaviors measured, with students' strengths being class attendance, promptness, not memorizing word for word, and keeping notes in a notebook. Weaknesses described by students included cramming for exams, failure to use graphic aids while studying, and inadequate note-taking strategies. Scores on the SHI-HS declined from 9th to 11th grade but showed improvement in 12th grade. Scores differed significantly across tracks with each higher track successively outperforming each lower track. No significant differences between the behaviors of males and females were noted.

BRITTAIN, MARY M., & BRITTAIN, CLAY V. (1992). Questioning the verbal superiority of girls: Gender differences revisited. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 227–231). Provo, UT: College Reading Association.

Reports recent research of verbal superiority and gender differences. Selected studies report that gender differences found were minimal and could be contributed to confounding factors such as testing. Implications are discussed.

IV-3 Intellectual abilities and reading

ARAM, DOROTHY M.; MORRIS, ROBIN; & HALL, NANCY E. (1992, November). The validity of discrepancy criteria for identifying children with developmental language disorders. *Journal of Learning Disabilities, 25*, 549–554.

Questions the validity of discrepancy criteria for identifying children with developmental language disorders (DLD). In two studies, children were underidentified or overidentified using discrepancy criteria. Study 1 involved 256 preschoolers and used a nonverbal IQ-Language Discrepancy (subtests of the Stanford-Binet and the TELD). Using standard error of measurement as the criterion, 155 children were identified; using individual residual scores, 101 children were identified; using CA-language discrepancy, 129 were identified. The use of an absolute cutoff score identified still different numbers of preschoolers. Study 2 involved 368 eight-year-olds. As part of an extensive battery, students completed the WISC-R, the PPVT-R, the Token Test for Children, the Rapid Automatized Naming Test, and portions of the Clinical Evaluation of Language Functions. Using discrepancy criteria, 34% of the targeted children and 45% of the control children were identified as having language disorders. When a second, stricter criterion was applied, data indicated far more children classified than general estimates of the incidence of language disorders in the population. Data from both studies suggest the need to question the use of IQ-language discrepancy criteria for identifying developmental language disorders.

NORMAN, CHARLES A.; MALICKY, GRACE; LEROY, CAROL; WU, ZHOU; & JULIEBO, MOIRA. (1992, Summer/Fall). Cognitive and metacognitive operations in emergent literacy. *Reflections on Canadian Literacy, 10*, 88–95.

Explores the utility of Sternberg's Triarchic Theory of Intelligence for describing the cognitive and metacognitive operations demonstrated by 16 children, aged 3–6, as they engaged in a series of emergent reading and writing tests using varied types of print materials. Sessions were transcribed and reviewed to match the three subcomponents of the model. While there was considerable overlap in occurrence of responses within the metacognitive and performance components at various age levels, there were some developmental trends. Overall, the model was useful for determining the thinking of these children as they engaged in the emergent reading and writing activities.

CORNWALL, ANNE. (1992, October). The relationship of phonological awareness, rapid naming, and verbal memory to severe reading and spelling disability. *Journal of Learning Disabilities, 25*, 532–538.

Examines the relation of phonological awareness, naming speed, and verbal memory to word attack, word identification, reading comprehension, and spelling skills in children with severe reading disabilities. Subjects were 48 boys and 6 girls who were referred for assessment of learning disabilities. Each subject had average intelligence (defined as a WISC-R Full Scale IQ of 90 or more) and a Standard Score on the WRAT-R Reading subtest that was at least 16 points lower than his or her Full Scale IQ. Nine measures were administered to all subjects: the WISC-R, the WRAT-R Reading and Spelling subtests, the GORT-R, the Word Attack subtest of the WRMT-R, the Child Behavior Checklist, the Sentence Memory Test, the Verbal Selective Reminding Test, the Rapid Automatized Naming Tests, and the Rosner Auditory Analysis Test. Multiple regression analyses indicated that the best predictor of achievement across the five academic tests was the Verbal Comprehension factor from the WISC-R. Age, SES, and externalizing behavior problems were also significant predictors of achievement, depending on the academic measure. After controlling for age, SES, behavior problems, and intelligence, the phonological awareness task added significantly to the prediction of word attack, spelling, and reading comprehension scores. Rapid letter naming added significantly to the prediction of word identification and prose passage speed and accuracy scores, and a word-list memory task added significantly to the prediction of word recognition scores.

IV-4 Modes of learning

GLENBERG, ARTHUR M., & LANGSTON, WILLIAM E. (1992, April). Comprehension of illustrated text: Pictures help to build mental models. *Journal of Memory and Language, 31*, 129–151.

Reports two experiments designed to test the facilitative effects of pictures on text comprehension. Subjects for Experiment 1 were 48 undergraduates; Experiment 2 subjects were 36 volunteers. Subjects read 32 texts describing four-step procedures in which the middle steps were described as occurring at the same time, although the verbal description of the steps was sequential. After reading each text, subjects were given six speeded tests and a true or false comprehension question. Reaction times and error rates were determined, and the proportion correct was used as the main dependent variable. Results of ANOVA testing revealed that subjects in the with-pictures condition responded more accurately than did subjects in the no-pictures condition. Analyses from Experiment 2 revealed that performance in the linear picture condition was notably poorer than in the with-picture condition, and it was even worse than in the no-picture condition. When the texts were accompanied by appropriate pictures, subjects tended to mentally represent the procedures. When the texts were presented alone or with pictures illustrating the order in which the steps were described in the text, subjects tended to mentally represent the text.

OLSEN, DAVID A. (1992, Winter). Learning styles in language arts: A far, far better thing, or just a red herring from the far side? *Indiana Reading Quarterly, 25*, 13–21.

Reviews relevant literature to examine four aspects of learning style and their implications for language arts education: (1) the assumption that learning style can be matched to instructional method; (2) the consequences of attempting to match learning style and method; (3) multicultural implications of learning style; and (4) legitimate uses of knowledge of learning styles. A learning style model was defined as diagnosis of a student as having a particular way of learning that remains stable over time and tasks, and the prescription of a way of teaching that emphasizes particular types of stimuli in particular types of cognitive activities that are presumed to match a child's diagnosed learning style. The reviewer concludes that although the learning styles model seems to make intuitive sense, the efficacy of diagnosing learning styles and prescribing appropriate language arts teaching methods particularly suited to those styles has not been supported by credible evidence; moreover, the use of a learning style model risks disparate impact on cultural minorities.

MOORE, PHILLIP J.; CHAN, LORNA K.S.; & AU, WING K. (1993, February). High school students' use of diagrams during reading. *Journal of Research in Reading, 16*, 57–71.

Explores secondary level students' use of diagrams and summaries during reading. The impact of such devices on reading comprehension is also examined in relation to subjects' verbal and spatial abilities. Subjects were 80 Year 7 (13-year-old) pupils at a comprehensive metropolitan high school in Australia. Subjects were selected on the basis of at least average performance on the Vocabulary subtest of the Progressive Achievement Test. Also administered was the Card Rotation subtest of the Kit of Factor Referenced Cognitive Test. Following training, subjects read a 600-word text presented on a computer screen one sentence at a time. A diagram or summary of the main idea of the text was displayed anytime during the reading at the subject's request. Time spent reading each sentence, diagram, or summary was controlled by the subject and recorded by the computer. The computer also kept a record of where in the text subjects elected to use any particular aid. Upon completion of the reading, subjects took part in a 10-minute filler task followed by a writing task requiring free recalls of the reading. The recalls were analyzed for their inclusion of main ideas and details. Path analysis revealed a significant direct effect of verbal ability on recall of main ideas, details, as well as a significant indirect effect through time spent on the diagram. Recall was not influenced by spatial ability in any way. Reading of sentences early in the text was accompanied by more text to diagram moves than reading of later sentences, with later sentences being accompanied by an essentially random inspection pattern.

WEBB, JAMES M.; THORNTON, NANCY E.; HANCOCK, THOMAS E.; & MCCARTHY, MICHAEL T. (1992, July). Drawing maps from text: A test of conjoint retention. *Journal of General Psychology, 119*, 303–313.

Tests the conjoint retention hypothesis with reference to maps constructed by readers based on related text. Subjects were 163 undergraduate volunteers who read a narrative text in one of three conditions of text feature elaboration: spatial, descriptive, or both spatial and descriptive text referents. After studying the passage, subjects in each condition were instructed to draw maps with accurate geographical features, personal representations designed to help them remember the narrative, or target map features in columns. Subjects were administered measures of immediate and delayed (2 days) recall of feature-related and non-related text material. Following completion of the delayed measure, subjects attempted to reconstruct the map they had drawn while studying the passage. A 3 x 3 x 2 x 2 (Text Type x Drawing Instructions x Item Type x Test Occasion) unweighted means ANOVA indicated that personal map drawing resulted in superior test recall and higher conditional probabilities of recall for feature-related information, given that the subject had recalled the feature on the map. Results support the hypothesis that holds that verbal information is retrieved conjointly from verbal and spatial memory stores.

GERNSBACHER, MORTON ANN; VARNER, KATHLEEN R.; & FAUST, MARK E. (1990, August). Investigating Differences in General Comprehension Skill. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 430–445.

Examines individual differences in general comprehension ability. In Experiment 1, 270 undergraduates were administered the Multimedia Comprehension Battery (MCB), which includes six stories: two presented by written sentences, two presented by auditory sentences, and two presented by pictures. After reading, hearing, or viewing each story, subjects responded to 12 comprehension questions. Analysis revealed that skill in comprehending written, auditory, and pictorial stories is highly correlated and that general comprehension skill transcends oral language. For each subsequent experiment, two groups of subjects were selected from individuals who previously had been administered the MCB: one group from the top third of the performance distribution and one group from the bottom third. For Experiment 2, the 15 subjects in each group were presented with six new stories, two in each modality, and assessed on how well they could access the original word order of sentences or the original left-to-right orientation of the pictures. Group comparisons for each of the three modalities suggested that less skilled comprehenders lose access to information earlier than more skilled comprehenders. Results of Experiment 3 demonstrated that for more skilled comprehenders, scrambled stories produced reduced access to recently comprehended information, while for less skilled comprehenders there was no difference in access of information from normal stories versus scrambled stories. These results supported the hypothesis that less skilled comprehenders shift mental substructures too frequently when comprehending stories, regardless of modality. Experiment 4 compared more and less skilled comprehenders' ability to suppress irrelevant information. Sixty-four subjects, half at each comprehension level, read 80 sentences. Findings supported the hypothesis that less skilled comprehenders suppress irrelevant information less rapidly and less efficiently than more skilled comprehenders.

WITTROCK, M.C., & ALESANDRINI, KATHRYN. (1990, Fall). Generation of summaries and analogies and analytic and holistic abilities. *American Educational Research Journal, 27*, 489–502.

Investigates the effect of generating summaries and generating analogies on learning from text as well as the relation between spatial-holistic (imagery) ability and verbal-analytic ability and learning from text. Participants were 57 undergraduate students, randomly assigned to one of three treatments. All students read a 5,200-word selection. The control group of students read the text only, a second group was instructed to generate analogies after reading the text, and a third group was instructed to generate summaries after reading the text. Students were tested on text recall, verbal-analytic ability, and spatial-holistic ability. Results indicated that students in both experimental groups performed significantly better than did students in the control group on the test of text recall; there was no significant difference between experimental groups. Verbal-analytic ability and spatial-holistic ability were found to correlate differently with learning from text across the three conditions. In the control treatment, only spatial-holistic ability correlated with learning. In the Generate Analogies treatment, only verbal-analytic ability correlated with learning. In the Generate Summaries treatment, both abilities correlated with learning.

IV-5 Experiments in learning

VAN DAM, GERRITT, & BRINKERINK-CARLIER, MICHÈLE. (1991, August). Effect of reutilization of retrieval cues on free recall of text. *Psychological Reports, 69*, 227–230.

Investigates whether retrieval of a studied text containing isolated paragraphs is inhibited if subjects process an interpolated text prior to free recall of the original text. The 45 undergraduate subjects at a Dutch university were assigned to one of two experimental conditions or a control condition. Subjects studied an expository text containing 20 isolated paragraphs, each accompanied by a retrieval cue. Experimental subjects were given a sentence completion task or a new learning task in which half of the cues were used again. Controls had an arithmetic serial-completion task following the 10-minute study period. After a 15-minute retention interval, subjects were to retell the original text. Each subject then received a list of all 20 retrieval cues and was allowed to supplement his or her recall. No significant differences were found between the effects of the two different kinds of interpolated tasks. Processing of interpolated materials appeared to hamper recall of original text. Presentation of the cues after initial recall did not increase reproduction of recall to the level of recall in the control group.

McCormick, Christine L.; Levin, Joel R.; & Valkenaar, Debra E. (1990, Winter). How do mnemonic and thematic strategies affect students' prose learning? *Reading Psychology, 11*, 15–31.

Describes the effects of a mnemonic strategy, a thematic strategy, and a combined strategy on recall and organization of biographical information. Subjects for the first experiment were 89 students at a midwestern U.S. university, and subjects for the second experiment were 160 students at the same university. In the first experiment, subjects were randomly assigned to one of four conditions: (1) control, (2) mnemonic, (3) thematic, and (4) mnemonic plus thematic. All students read six biographies. In the mnemonic condition, the texts were accompanied by mnemonic strategies integrating characters' names with biographical information. In the thematic condition, students read versions of the biographies that highlighted an explicitly stated theme. Students were tested on passage recall and passage clustering (organization of information). The second experiment replicated the first but used 12 biographies instead of 6. Results of the two experiments indicate that the mnemonic strategy produced better recall and organization when 12 passages were presented, while the thematic strategy was more effective when 6 passages were presented.

Davidson, Denise, & Hoe, Sony. (1993, February). Children's recall and recognition memory for typical and atypical actions in script-based stories. *Journal of Experimental Child Psychology, 55*, 104–126.

Examines, in two experiments, young children's recall and recognition memory for typical and atypical action in script-based stories. Participants for each experiment were preschool and first grade children from middle-class communities in the midwestern United States. For both experiments, children were read stories containing typical script-based sentences and three types of atypical action sentences: plausible within the story; plausible within the sentence, but not within the story; and implausible within the sentence as well as within the story. Recall memory of stories was assessed immediately and one day later by having children retell as much of the story as they could remember. Recognition memory of the target sentences was assessed immediately and one day later through yes or no questions about information that was or was not present in the story. Mixed model ANOVA procedures applied to the data showed that, on both days, children's recall for atypical action exceeded typical script-based action. Less plausible atypical action was better recalled than more plausible atypical action. Differences between recognition memory for each type of atypical action were insignificant.

GREENE, TERRY R. (1991, December). Text manipulations influence children's understanding of class inclusion hierarchies. *Journal of Experimental Child Psychology, 52*, 354–374.

Examines children's external representations for verbal passages which could be represented as class inclusion hierarchies, explores how the ability to construct external representations may directly influence performance on a subsequent task designed to test children's understanding of the structure of hierarchies, and studies how text presentation may affect children's ability to construct external representations. Subjects were 72 children; 24 were second graders, 24 were fourth graders, and 24 were sixth graders. Four versions of a passage were employed. One version represented a top-down presentation of the material in which category labels were repeated at each level of the hierarchy. A second version was also a top-down presentation, but novel labels were introduced at each hierarchical level. The remaining two versions presented materials in a bottom-up fashion, one with repeated labels, the other without. Subjects were requested to construct an external representation for the passage and to respond to questions requiring them to reason about its contents. Factors scored included the presence of nodes and the presence of features or attributes and their association with the proper nodes. Analyses revealed that quality of representation and performance on the question task were related to grade level and text manipulations. Younger pupils tended to draw, and older subjects preferred a written mode. There was a tendency for fewer words and more structure with increasing age. A top-down presentation and repetition of category labels appeared to help children notice the hierarchical structure of the material and, therefore, construct more coherent external representations. The facilitation effect was more pronounced for younger subjects.

LORCH, ROBERT F., JR.; LORCH, ELIZABETH PUGZLES; & KLUSEWITZ, MADELINE A. (1993, June). College students' conditional knowledge about reading. *Journal of Educational Psychology, 85*, 239–252.

Explores college students' knowledge about the conditions under which specific reading strategies are most effective. A typology of reading situations along with processing strategies required by each type of reading was formulated. The study encompassed 3 steps, each involving the use of different groups of introductory psychology students as subjects. In the first step, 58 subjects generated an extensive list of situations, each involving reading of specific types of material for specific purposes. In the second step, 195 subjects sorted the reading situations in accordance with how they perceived themselves as reading in each. Hierarchical cluster analysis revealed 10 distinct categories of reading situations, of which 4 might be associated with school reading and 6 might be associated with personal choice reading. In the third step, 128 subjects rated the reading situations according to the processing demands they perceived that the situations required. Correlational analyses revealed a strong relation between perceived processing demands of the reading situations and interpretations of sorting data. Results validated the typology derived from the cluster analysis.

VARNHAGEN, CONNIE K. (1991, October–December). Text relations and recall for expository prose. *Discourse Processes, 14*, 399–422.

Introduces a modification of a system for analyzing causal relations in narrative for application to expository prose and compares the efficacy of the modified system to two other established systems for predicting expository prose recall. Subjects were 20 seventh graders and 20 ninth graders as well as 20 college students enrolled in an introductory psychology course. Subjects were asked to read two expository text passages and then to produce written recalls of each text exactly as they remembered them immediately and again 1 week after the readings. Recalls written at each time of testing were scored according to criteria developed for each system of analysis. Separate age x recall condition x level of analysis repeated measures ANOVAS were performed on each text using the three different systems of analysis. All three systems produced overall age and recall delay effects. Two of the systems showed equivalently high sensitivity to specific developmental and recall delay differences as a function of text relations.

Iding, Marie K. (1993, January–March). Instructional analogies and elaborations in science text: Effects on recall and transfer performance. *Reading Psychology, 14*, 33–55.

Describes two studies comparing the recall and transfer performance of subjects receiving either an extended instructional analogy or elaborations in science text. In Experiment 1, subjects were 60 introductory psychology students, consisting of an elaboration group of 29 subjects and an analogy group of 31 subjects. Materials included two variations of a passage on the human eye, a pretest, a multiple-choice test of transfer, and a written recall test. In the analogy version, information comparing aspects of the human visual system to a camera was interspersed throughout the text. In the elaboration version, the analogy material was replaced with additional information about the topics being discussed. Subjects' near, intermediate, and far transfer performance was assessed via the multiple-choice test. ANOVA testing revealed no main effects for groups. In Experiment 2, a within-subjects design, involving 41 introductory psychology students, was applied. The design incorporated a within-subjects assessment of receiving either elaboration material for the first half of the passage then analogy information in the second half or analogy information for the first part then elaborations. The same dependent measures used in Experiment 1 were applied. There was a significant three-way interaction between grouping, the analogy and elaboration factor, and transfer type. Basically, for subjects in the elaboration-analogy group, performance on near transfer and intermediate transfer items corresponding to elaboration text portions was better than performance for near and intermediate transfer corresponding to the analogy portions of the text. For far transfer, a reversal occurred and performance associated with the analogy portion of the text became the highest mean performance level of any transfer type observed.

Verschaffel, Lieven; DeCorte, Eric; & Pauwels, Ann. (1992, March). Solving compare problems: An eye movement test of Lewis and Mayer's consistency hypothesis. *Journal of Educational Psychology, 84*, 85–94.

Discusses three eye movement experiments designed to test hypotheses derived from a simulation model for understanding compare word problems in arithmetic. The first experiment with university students solving one-step compare problems revealed no evidence in favor of the model. The data of the second experiment conducted with third graders provided good support. To further explore the results of the first experiment, a third experiment was carried out in which university students were given a set of two-step compare problems. The results also supported the model, suggesting that the model holds true only when the task puts some cognitive demands on the subject.

Kulhavy, Raymond W.; Woodard, Kristina A.; Haygood, Robert C.; & Webb, James M. (1993, February). Using maps to remember text: An instructional analysis. *British Journal of Educational Psychology, 63*, 161–169.

Studies the facilitative effect of a map on recall of factual text information. Participants were 45 undergraduate volunteers. Materials included a map containing 18 features, each depicted by an icon drawing with a two-word label printed below it. Subjects were randomly assigned to one of three conditions: (1) the intact group saw the map as an intact unit, (2) the no-context group also saw the map, but the land border and internal paths were completely removed, and (3) the individual feature group saw 18 pages, each contain-

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ing one feature located in the exact spot seen by the other two groups. Subjects read a 500-word text containing information about the history, tourist sites, and economics of the map. Each of the 18 map features was mentioned once in the text and at the same time linked to an event taking place at the spot where the feature was located. The 18 events were randomly assigned to features. One-third of the subjects in each condition received a different feature-event distribution. Subjects were met individually and told that they would be required to learn a map and to describe verbally what they were doing as they learned it. Students were allowed 4.2 minutes to study the map while thinking aloud. Following the think-aloud phase, students were given four minutes to reconstruct the map. Next, subjects were given the printed text and told to use the map they had studied to help them learn the facts. Five minutes later, the text was collected and subjects were to write as much as they could recall of the text. Subjects provided with the intact map tended to recall more text events than those in the individual feature group. Intact arrays, with and without context, led to better overall memory for features. Accurate location of reconstructed features was higher for the intact group.

TANG, GLORIA. (1992, June). The effect of graphic representation of knowledge structures on ESL reading comprehension. *Studies in Second Language Acquisition, 14*, 177–195.

Studies the effect of a graphic representation of knowledge structures on seventh grade ESL children's comprehension of content knowledge in order to determine if such a strategy can simultaneously facilitate both content knowledge and understanding of academic English. Subjects participated in a pretest, practice session, posttest, and semistructured interview to determine their attitudes toward the facilitative effect of teacher-provided tree graphs of classificatory texts. Treatment consisted of teaching children to read a tree graph and giving them practice in reading and interacting with tree graphs. Scoring was based on the number of idea units recalled and the structure or organizational patterns in written recalls. Differences between the graphic and the nongraphic groups were significant. Using a graphic increased the total amount of information recalled and the structure of the written recalls. In interviews, most students reported that the graphics were helpful, although they differed on why they found the graphic helpful.

KULHAVY, RAYMOND W.; STOCK, WILLIAM A.; PETERSON, SARAH E.; PRIDEMORE, DORIS R.; & KLEIN, JAMES D. (1992, January). Using maps to retrieve text: A test of conjoint retention. *Contemporary Educational Psychology, 17*, 56–70.

Tests the conjoint retention hypothesis which holds that information contained within a subject's mental representation of a map can be used to successfully access related verbal information during retrieval. In the first experiment, 79 undergraduates studied a town map showing a number of locations, each identified by a printed label and an icon line drawing. After studying the map, subjects listened to a text describing the town. Text retrieval was then cued by the original map; a map without icons but with labels in the same locations as found on the original map; a map on which locations were randomized but represented by icons and labels; or a map on which location labels were randomized and icons were removed. In the second experiment, 71 undergraduates studied the same town map before listening to the related text being read. Recall was measured in four cueing conditions: two with maps and two without maps. In the map conditions, one map contained labels and icons and the other contained labels only. In the no-map condition, individual labels or individual labels with icons served as cues. Results of both experiments showed that subjects recalled more text events when cued by the original map. Findings support the notion that maps improve text recall when they retain feature and structural relations available during encoding.

Lorch, Robert F., Jr.; Lorch, Elizabeth Pugzles; & Inman, W. Elliot. (1993, June). Effects of signaling topic structure on text recall. *Journal of Educational Psychology, 85*, 281–290.

Observes how emphasizing a text's topic structure through signaling devices (that is, headings) affects text recall. In the first experiment, 203 introductory psychology students read long and short versions of simple and complex texts with and without signals. Topic structure recall was assessed by having subjects write down as many different topics as they could remember. Topic recall was scored for accuracy and order of topics recalled. ANOVA results showed that subjects in the signaled conditions recalled more topics than subjects in the unsignaled conditions and displayed greater recall for simple texts than for complex ones. Rank order correlation analysis showed that signaling produced better organized recalls than lack of signaling. The second experiment assessed signaling effects on recall of subordinate text information. Eighty-two introductory psychology students read long and short versions of a text with and without signals, with direction to recall as much of the content as they could remember. Written free recalls were scored for number of ideas accurately recalled. ANOVA and correlation analysis results showed that subjects who read signaled texts recalled more topics but less about each accessed topic than subjects who read unsignaled text. Content ideas recalled by subjects in the signaled condition were more tightly organized around topics, with order of idea recall more closely following the order presented in the text.

Intraub, Helene, & Hoffman, James E. (1992, Spring). Reading and visual memory: Remembering scenes that were never seen. *American Journal of Psychology, 105*, 101–114.

Designs two experiments to test a method for inducing errors in reality monitoring. In Experiment 1, under conditions of high memory load (60 pictures and 50 paragraphs) and a 1-week retention interval, 16 undergraduate subjects reported their memory for photographs of scenes (cued recall and free-recall tasks). Subjects frequently reported memory for photographs that they had actually never seen but had read about in a brief paragraph. In Experiment 2, the same pattern of results was obtained with immediate testing of subjects (n = 40). Experiment 2 also demonstrated that the likelihood of subjects falsely attributing scene memory (based on reading) to actually having viewed a photograph was reduced when metacognitive awareness of imaging during reading was made salient. Awareness of image creation was induced by requiring subjects to rate the paragraphs with respect to imagery vividness. Although other measures of memory remained the same, subjects in the induced-imagery condition made 50% fewer confusion errors than subjects who read the paragraphs without imagery instructions.

Marmurek, Harvey H.C., & Rinaldo, Richard. (1992, June). The development of letter and syllable effects in categorization, reading aloud, and picture naming. *Journal of Experimental Child Psychology, 53*, 277–299.

Details the procedures and results of two experiments designed to determine the locus of letter and syllable effects in early readers (Grade 2 pupils), moderately skilled readers (Grade 4 pupils), and skilled readers (university students). For Experiment 1, the number of subjects in each grade was 29 in Grade 2, 49 in Grade 4, and 36 in university. The number of subjects in Experiment 2 included 17 in Grade 2, 22 in Grade 4, and 20 in university. Stimuli were selected to conform to the factorial combination of number of syllables (1 and 2) and number of letters (4, 5, and 6). In Experiment 1, subjects completed a semantic categorization task. In Experiment 2, subjects completed a word naming task and a picture naming task. Experiment 1 revealed that categorization times for Grade 2 pupils were directly related to the number of letters in one-syllable words. For two-syllable words, Grade 2 and

Grade 4 children produced the longest categorization times for four-letter words. This letter x syllables interaction was replicated in Experiment 2 for both word naming and picture naming. University students showed the effect only for picture naming.

Waters, Gloria S.; Caplan, David; & Leonard, Carol. (1992, February). The role of phonology in reading comprehension: Implications of the effects of homophones on processing sentences with referentially dependent categories. *The Quarterly Journal of Experimental Psychology, 44A*, 343–372.

Applies two experiments to investigate whether phonological representations are activated in the processing of anaphors in reading, and if they are, whether they play a role in the initial (first-pass) processing of the sentence or in review (second-pass) processes. Each experiment involved 40 undergraduates. Subjects made sentence acceptability judgments for sentences that contained either verb gaps or indefinite and personal pronouns (overt anaphors). All sentences contained homophones. Half of the semantically unacceptable sentences were phonologically plausible if the homophones were inserted in the gap or used as the referent of the pronoun. The other half of the semantically unacceptable sentences were phonologically implausible. In both experiments, half of the subjects saw the sentences under normal viewing conditions (whole sentence condition); for the other half of the subjects, the words of each sentence were presented sequentially in the center of the video screen at the rate of 250 msec/word (RSVP condition). A large proportion of the phonologically implausible sentences in the first experiment contained phrases in the second clause which resulted in semantic oddities. The sentences in Experiment 2 did not contain such oddities. In Experiment 1, subjects made more errors on the phonologically plausible than implausible sentences with both verb gaps and pronouns. They displayed longer latencies for phonologically implausible than plausible sentences for pronouns. The effects of phonological plausibility only arose when the second clause of phonologically implausible sentences contained a semantic oddity. The effects of phonological plausibility only occurred in the whole sentence condition. Phonological information appeared to be used only by second-pass processing. There was no effect of phonological plausibility in Experiment 2.

Laxon, Veronica; Masterson, Jackie; Pool, Maggie; & Keating, Corriene. (1992, July). Nonword naming: Further exploration of the pseudohomophone effect in terms of orthographic neighborhood size, graphemic changes, spelling-sound consistency, and reader accuracy. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 730–748.

Presents the results of five experiments designed to examine nonword pronunciation. Subjects for these studies included adults (Experiments 1, 3, 4, and 5) and children in their fifth and seventh years in school (Experiment 2). Regular pronunciations increased as the number of orthographic neighbors (N) increased. Adults read pseudohomophones more accurately than other nonwords only when the nonwords were low N, shared the consonants with the words on which they were based, and overall accuracy was lower. Children showed a pseudohomophone advantage even when N was high. Adults pronounced nonwords comprised of inconsistent endings (with existing regular and irregular pronunciations) in an irregular fashion when this resulted in a word. This applied to relatively high-N items.

Jacoby, Larry L.; Levy, Betty Ann; & Steinbach, Karen. (1992, January). Episodic transfer and automaticity: Integration of data-driven and conceptually-driven processing in rereading. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 15–24.

Explores, in three experiments, how the integration of data-driven processes and conceptually driven processes mediate reading fluency. Subjects for all experiments were undergraduate volunteer students enrolled in introductory psychology classes. Experiment 1 examined the effects of physical variations in script (visual perceptual specificity) on rereading and answering time. Under timed conditions, 48 subjects either read aloud or heard and repeated as rapidly as possible a set of questions (Phase I). This was followed immediately by oral reading of that set of questions (Phase II). In an alternate task, subjects answered as rapidly as possible questions which they read silently or heard (Phase I), and then they silently read and answered the questions again (Phase II). In Phase I, questions were read in elite type script from a computer monitor or in script type font from a card, or they were heard from an audiotape. In Phase II, all questions appeared in elite type script on a monitor. Results of ANOVA procedures that were applied to the data supported the notion of episodic transfer by showing that questions were reread and answered more rapidly when typeface remained constant. Sensitivity to script change was observed during silent reading but not during oral reading. To rule out any role of intentional memory on results of Experiment 1, Experiments 2 and 3 examined the effects of 24 hour delay between the repetition of questions. Subjects were 24 students for Experiment 2 and 40 students for Experiment 3. ANOVA results paralleled those observed in Experiment 1. Taken together, the results of the three experiments demonstrate reliable script sensitivity in an easy, semantically based reading task using normal script.

Paul, Stephen T.; Kellas, George; Martin, Michael; & Clark, Matthew B. (1992, July). Influence of contextual features on the activation of ambiguous word meanings. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 703–717.

Conducts three studies to explore whether initial meaning activation is sensitive to context. Subjects in the three experiments (n = 64, 96, and 64 in Experiments 1, 2, and 3, respectively) were university students taking introductory psychology courses. A modified Stroop task was used, requiring subjects to name the color in which each word was displayed. Experimental stimuli were 96 different homographs (targets) to complete sentences that constrained only one sense (either the dominant or subordinate meaning) of the ambiguous word. Experiment 1 demonstrated that contextually appropriate targets were activated more than inappropriate targets. A prime dominance and target dominance interaction showed effects of context on meaning activation for both dominant and subordinate senses of sentence-final homographs. This context effect occurred even for low-salient targets. Experiment 2 evaluated activation across intervals of 0, 300, and 600 ms. Constraining sentences activated contextually appropriate meanings over inappropriate meanings. This was maintained across the internals for highly salient targets. Less salient targets, although initially activated., were no longer activated 300 ms following the homograph. Experiment 3 converged on context-sensitive activation following a 50-ms exposure of the sentence-final homograph. These results supported the influence of sentence contexts on initial meaning activation.

Levy, Betty Ann; Di Persio, Robert; & Hollingshead, Ann. (1992, September). Fluent rereading: Repetition, automaticity, and discrepancy. *Journal of Experimental Psychology, 18* (5), 957–971.

Examines readers' sensitivity to discrepancies introduced in familiar texts through a series of six experiments. The first two experiments looked at readers' sensitivity to variations in the visual display once they were familiar with the passage. Twenty-four undergraduate volunteers from an introductory psychology class read each passage three times, crossing out word and nonword misspellings that differed each time through. On the fourth reading, while subjects were still looking for misspellings, an unexpected change in the typescript or spacing occurred. Subjects' fluency of the rereading was not interrupted, and they read it faster than during the initial trials. These results suggest that memory representations were being used during the rereading. In Experiments 3 and 4, the discrepancies that occurred during the rereading of texts were subtle changes in the wording which left the meaning the same or altered the meaning. Results found that the rereading time was sensitive to unexpected meaning changes indicating that meaning was still being analyzed even on the fourth and fifth reread. Experiments 5 and 6 showed that this sensitivity was on-line, occurring in the interval in which the discrepancy was encountered. Findings are discussed in terms of episodic transfer across repetitions.

WADE, SUZANNE E.; SCHRAW, GREGORY; BUXTON, WILLIAM M.; & HAYES, MICHAEL T. (1993, April/May/June). Seduction of the strategic reader: Effects of interest on strategies and recall. *Reading Research Quarterly, 28*, 93–144.

Investigates how interest and importance interact to affect the strategy use and recall of skilled readers. Two experiments were conducted with college students from an introductory education course (n = 43 for Experiment 1, and n = 30 for Experiment 2). The first experiment examined the reading times and recall of readers for information that varied in interest and importance. The second was an interview study in which readers were asked to describe the strategies they used to study text excerpts of high or low interest and importance. Subjects read a 2,100-word text in which each sentence had been rated for interest and importance. In Experiment 1, reading times were determined and recall was measured on a free written test. Two ANOVAS were conducted, one for each dependent measure. In Experiment 2, subjects read the same passage and completed the free recall task before they were interviewed regarding their reactions to specific text sections (representing high and low importance and interest) and their studying strategies. These verbal reports were scored by determining frequency counts of specific descriptions and strategies. Results of the two experiments revealed that readers acted strategically, except when they encountered seductive details. Specifically, they devoted extra time and effort to information that they found essential but difficult to remember. They devoted relatively little time and effort to information that they believed to be essential and highly memorable. In contrast to such strategic behavior, they spent a good deal of time on seductive details, even though they considered them highly memorable and unimportant. Finally, highly interesting information was recalled better than uninteresting information.

MCALLISTER, JAN. (1991, January–March). The processing of lexically stressed syllables in read and spontaneous speech. *Language and Speech, 34*, 1–26.

Describes four experiments which examined the processing of words with stressed and unstressed initial syllable in both read and spontaneous speech. In the first experiment, which focused on read materials, trisyllabic nouns were presented in three contextually defined conditions to 36 subjects. Analysis of the responses made by subjects hearing only the initial syllable of the stimuli revealed that stressed initial syllables were markedly more intelligible than their unstressed counterparts; but when subjects were presented with the full stimulus, there were no reliable intelligibility differences. In Experiment 2, a large number of polysyllabic content words, excised from the speech of six speakers, were presented without supporting context. Significant effects were found for version (Read vs. Spontaneous) and stress (Initially Stressed vs. Initially Unstressed) on several dependent variables, but version and stress failed to interact in the predicted manner. In Experiment 3, in which a subset of materials from Experiment 2 was presented in context, an interaction was observed. Experiment 4, conducted with university undergraduates and postgraduates, suggested that the interaction stemmed from a reduced availability of contextual cues in spontaneous speech, due to the relatively poor intelligibility of the preceding sentence fragment.

Albrecht, Jason E., & O'Brien, Edward J. (1991, September). Effects of centrality on retrieval of text-based concepts. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 932–939.

Investigates, in four experiments, the influence of information importance (or centrality) on retrieval after passage reading. Subjects for the four experiments were university students enrolled in psychology courses. Sample sizes ranged from 18 to 45 students. In each experiment, subjects read passages containing concepts that had been rated as central, moderately central, or peripheral to the passage, and then were asked to retrieve those concepts in timed tasks. In Experiment 1, subjects were given a recognition list that included unrelated false probes and were asked to tell whether each probe occurred in the passage or not. ANOVA revealed that central concepts were more quickly identified than less central ones. Experiment 2 replicated Experiment 1, except that unrelated false probes were substituted with probes that were highly related but still false. There was a much larger recognition advantage of central concepts over less central ones. To encourage speeded recall rather than recognition, subjects in Experiment 3 were asked to respond orally with one-word answers to three questions that followed each passage. Central concepts were retrieved more quickly than peripheral concepts. Experiment 4 replicated Experiment 3 with modifications designed to rule out simple strength interpretations. Cumulative results of the four experiments provided strong evidence that text is represented as an integrated network in which central concepts are more interconnected. Interconnections provide additional access routes that simplify retrieval.

King, Jonathan, & Just, Marcel Adam. (1991, October). Individual differences in syntactic processing: The role of working memory. *Journal of Memory and Language, 30*, 580–602.

Examines how individual differences in the working memory capacity of readers affects processing of syntactic structures. Subjects for Experiment 1 were 46 college students: 24 were classified as High Memory Span (High Span) subjects, and 22 as Low Memory Span (Low Span) subjects based on their performance on the Reading Span Test. Subjects were shown sets of 1, 2, or 3 sentences. Half of the target (last) sentences in each set contained subject relative clauses, and half contained object relative clauses. After orally reading each set of sentences, subjects were asked the final word of each sentence in the set and were asked to respond to a true or false question that tested comprehension of the target sentence. Reading times on each word of the target sentence were also assessed. Results of various analyses applied to the data revealed that no or Low Span subjects had worse sentence final word recall than High Span subjects. No or Low Span subjects also had very poor understanding of object relative sentences as compared to the High Span subjects; although the reading times of the former in critical areas of these sentences were greater than those of the latter. Experiment 2 investigated how pragmatic information influences processing of object relative clauses of readers who differ in working memory capacity. Subjects were 24 Low Span and 24 High Span college students. Using procedures similar to those used in Experiment 1, subjects read target sentences, all of which contained object relative clauses that either did or did not provide pragmatic cues as to which of two potential actors in the sentence was the agent of the given verb. Results replicated the reading time effects of Experiment 1. Low Span readers benefitted from pragmatic information within the sentences, although use of this information was limited to the clause in which it was located.

Koriat, Asher, & Greenberg, Seth N. (1991, November). Syntactic control of letter detection: Evidence from English and Hebrew nonwords. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 1035–1050.

Reports five experiments designed to examine the syntactic control of letter detection. Two experiments were conducted with Union College university students in English; three experiments were conducted with other university students in Hebrew. Stimulus materials were developed by the researchers in both English and Hebrew. The results of this series of experiments revealed that for both English and Hebrew, nonwords produced more detection errors when placed in function slots than in content slots. A similar effect was found for Hebrew prefix nonwords, where the initial letter could be interpreted as a function morpheme or as part of the stem. The results suggested support for a structural model in which function morphemes are initially utilized to define the structural frame of a phrase but recede into the background as meaning is uncovered.

Swanson, H. Lee. (1992, December). Generality and modifiability of working memory among skilled and less skilled readers. *Journal of Educational Psychology, 84*, 473–488.

Reports two studies investigating whether individual differences in working memory are related to a general system or are process specific and whether the predictability of working memory to academic achievement can be enhanced under dynamic testing conditions. Included in Experiment 1 were 98 subjects, ranging in age from 5 to 18 years. All took the PPVT-R, five subtests from the PIAT-R, and an 11-task working memory battery measuring both episodic and semantic memory. Confirmatory factor analysis suggested that working memory tasks reflect two operations, with both operations producing similar correlational patterns to achievement. Experiment 2 tested the hypotheses under conditions that enhanced working memory performance to test the stability of the two-factor model and to determine whether working memory is more predictive under conditions enhancing item accessibility. The 129 subjects, ranging in age from 5 to 18, were given the same measures as in Experiment 1 but were given hints or prompts when they failed an item. Initial, probe, gain, and maintenance scores were determined. Results suggested that dynamic testing procedures enhanced predictions of reading performance and that working memory operates as a general system independent of reading skill.

Tirre, William C., & Peña, Carmen M. (1992, December). Investigation of functional working memory in the reading span test. *Journal of Educational Psychology, 84*, 462–472.

Reports two studies conducted with newly enlisted U.S. Air Force personnel to (1) investigate the validity of a reading span test combining a knowledge verification task and a word memorization task, and (2) determine if work recall reflects the amount of working memory that is functional in reading. Experiment 1, conducted on 283 subjects, determined the validity and reliability of the reading span measure. Subjects read general knowledge statements and responded true or false and memorized and recalled the final word of each sentence to measure working memory capacity. The criterion task, comprehension of a passage, was presented first, followed by the experimental tests and sections from the Armed Services Vocational Aptitude Battery. Percentage of correct recall decreased as memory load increased. Mean absolute number of items recalled increased. Estimates of internal consistency and stability coefficients were obtained, as were coefficients of correlation among tests. Word knowledge was the only test significantly correlated with word recall. Changes in the proportion of explained variance resulting from the addition of word knowledge, general knowledge, knowledge verification, and word recall were significant. Word recall added to vocabulary and general knowledge measures in predicting text comprehension. Two hypotheses for Experiment 2 were supported: that prior exposure to sentences used in the reading span test would release working memory and improve word recall and that word recall would add to general working memory and verbal knowledge measures in predicting comprehension, suggesting that a reading span test measures functional working memory in reading.

JOORDENS, STEVE, & BESNER, DEREK. (1992, May). Priming effects that span an intervening unrelated word: Implications for models of memory representation and retrieval. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 483–491.

Examines priming effects across an intervening unrelated word. Specifically addresses whether or not relatedness effects observed in previous studies are due to procedures that foster postaccess processes. Subjects for the three experiments were groups of graduate and undergraduate Canadian students. To provide a baseline against which results of subsequent experiments could be compared, Experiment 1 measured the magnitude of the relatedness effect when three related words were presented in immediate succession. Experiments 2 and 3 similarly measured relatedness effects when two related words separated by an intervening unrelated word were presented. Presentation procedures of related and unrelated triplets were specifically designed to eliminate postaccess processes as well as rehearsal and prediction explanations of the data. The dependent variables for each experiment were naming latency (in milliseconds) and percentage of error rate corresponding to the third word of the triplet. Findings provide evidence that procedures that discourage postaccess processes provide reliable relatedness effects.

RONNBERG, JERKER; LYXELL, BJORN; SAMUELSSON, STEFAN; ERNGRUND, KARIN; & NILSSON, LARS-GORAN. (1991, March). Recognition failure of prose-embedded words. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 288–301.

Evaluates, in eight experiments, the effects of varied conditions of semantic involvement on recognition failure of prose-embedded words during reading and retrieval. Subjects for all experiments were undergraduate students at two Swedish universities. Sample sizes for each experiment ranged in number between 20 and 96 students. Two main factors were systematically manipulated in all the experiments: number of trials and length of delay before the recall test. In experiments 1, 2, 3, 4, 5, and 8, subjects read a story for a given number of trials and, after a certain delay, produced a verbatim free recall of the text. A forced-choice recognition test was administered immediately after the recall test. Experiments 4 and 5 additionally examined the influence of prereading instruction to summarize and answer questions, with oral and written recall procedures being utilized in each experiment respectively. In Experiments 6 and 7, free recall was substituted by cued recall, and recognition was assessed with a single-item free recall technique prior to the recall test. Finally, in Experiments 7 and 8, target words were used that were thematically or nonthematically related to the content of the story. Results showed that: (a) under immediate test conditions, the probability of recognition, given recall, was predictable according to a quadratic function formulated earlier; (b) the numbers of trials before the recall test, the type of prereading inducement given, the response mode required, the type of propositions embedding the target, as well as the thematic status of the words did not generate systematic deviations from those predicted by the function; (c) deviations below the function, but not above, were replicable for longer delay conditions as well as conditions where targets thematically related to the story content were utilized; and (d) false recognitions, given recall, were biased to types of semantic lure in 93% of the failures made across experiments.

Tabossi, Patrizia, & Laghi, Linda. (1992, May). Semantic priming in the pronunciation of words in two writing systems: Italian and English. *Memory & Cognition, 20*, 303–313.

Compares semantic priming effects on the pronunciation of Italian and English words. Twenty different native speakers of Italian participated in Experiments 1 and 2. In Experiment 1, subjects pronounced Italian words that were semantically related or unrelated to Italian prime words, and reaction times for correct responses were recorded. Statistical analyses revealed priming effects for semantically related primes, suggesting the task was largely performed lexically. In Experiment 2, the prime and target word pairs used in Experiment 1 were supplemented with pairs in which the primes were meaningful Italian words and the targets were pronounceable nonwords. Analyses of reaction times and correct response data indicated priming effects for word pairs involving lexical decisions but not for those involving simple pronunciation. Subjects in Experiment 3 were a group of 18 native speakers of English and a group of 18 native speakers of Italian. Each group pronounced word targets shown after primes that were pronounceable pseudowords or actual words in their own native languages. Actual words were either semantically related or unrelated to the targets. Analysis of reaction time data showed the occurrence of semantic priming in English but not in Italian. Twenty native speakers of Italian in Experiment 4 were shown a target word or nonword shortly after a word prime. Target words were semantically related or unrelated to the primes. Additionally, some targets were words that are irregularly stressed in the Italian language. Results of reaction time data analyses demonstrated the abandonment of nonlexical reading in cases where the ability to pronounce a target was constrained by knowledge of correct stress assignment. Results of the four experiments suggest that reading generally occurs lexically. However, unusual circumstances may affect the strategies adopted by a reader.

Prinzmetal, William; Hoffman, Hunter; & Vest, Kimberly (1991, November). Automatic processes in word perception: An analysis from illusory conjunctions. *Journal of Experimental Psychology: Human Perception and Performance, 17*, 902–923.

Delineates the processes that are automatically evoked to perceive words. Subject samples across the seven experiments varied in number, age range, educational background and reading ability. Similar methodology was utilized over the seven experiments, with subjects briefly being shown multiletter words and pronounceable pseudowords and asked to indicate the color and identity of a target letter from a specified set of letters. Results cumulatively indicated that reading units are not delineated by phonology, but rather are demarcated by morphology and orthography. Perception of morphological units arises from lexical access, whereas perception of orthographic units does not. Good readers outperform poor readers in their ability to implement orthographic processes.

Shimada, Hiroyuki, & Nakajima, Yoshiaki. (1991, October). Double response to Stroop stimuli. *Perceptual and Motor Skills, 73*, 571–574.

Reevaluates response-competition explanations of the Stroop effect stemming from findings that showed response time for reading words before colors is shorter than response time for naming colors first. In Experiment 1, two groups (A and B) of eight university undergraduates responded to incongruent color-word stimuli displayed on a point-plot cathode-ray tube on line with a microcomputer. In Group A, subjects read the words first and named the colors second; while in Group B, subjects named the colors first and read the words second. Response times for each trial were measured by microcomputer, and total response time was computed for each condition. Results of a two-way ANOVA (order of task x type of task) with repeated measures performed on response time revealed no significant differences between conditions. In Experiment 2, two groups of six university undergraduates responded to color-word cards with incongruent combinations. Using design features, procedures and analyses that paralleled those used in Experiment 1, no significant differences between conditions were noted. Results of this study do not support response-competition explanations of the Stroop.

Potter, Mary C., & Lombardi, Linda. (1990, December). Regeneration in short-term recall of sentences. *Journal of Memory and Language, 29*, 633–654.

Tests, in seven experiments, the hypothesis that short-term recall of a sentence stems from a conceptual representation of the meaning of the sentence utilizing recently activated words. Various samples of volunteer college students from the same data pool participated in Experiments 1 through 6. Subjects were presented with sentences to be recalled. Immediately prior to or following the presentations, a synonym or nonsynonym probe for a word in the sentence was presented. Subjects were told to decide whether or not the probe had appeared in the sentence and then recall the sentence aloud. ANOVA results showed a high percentage of probe word intrusions (Experiments 1 and 2) but only when supported by the connotation of the sentence (Experiments 3 and 4). Synonym substitution occurred just as frequently when subjects read serially at 100 ms per word as at 200 ms per word (Experiment 5). Listening resulted in more synonym intrusions than reading (Experiment 6). Experiment 7 extended the findings of previous experiments to 4-year-old children and showed that children and adults make intrusions similarly. The hypothesis that short term memory of sentences is regenerated from meaning representation is sustained by the sum total of the study's findings.

Soraci, S.A., Jr.; Franks, J.J.; Carlin, M.T.; Hoehn, T.P.; & Hardy, J.K. (1992, July). A "popout" effect with words and nonwords. *Bulletin of the Psychonomic Society, 30*, 290–292.

Examines, in two experiments, the popout effect with words and nonwords in a same-different task, using a visual array format in which interstimulus contiguity increased with changes in set size. The popout effect is felt to occur in visual processing if a feature is detected with little or no increase in latency as the number of stimuli in the display increases. Thus a long target stimulus would be said to pop out from a set of short distractor stimuli. Subjects for Experiment 1 included 12 adult volunteers; subjects for Experiment 2 were 15 undergraduates. In the first experiment, stimuli consisted of 72 pairs of four-letter strings, each pair including a word and a nonword differing only with respect to the first letter in a string. Trials consisted of presenting 4, 6, or 8 stimuli, with the contrasting target, either a word or nonword, present on half of the trials. Subjects were to indicate whether all stimuli were the same or if one differed from the others. In Experiment 2, stimuli were presented in uppercase, and nonword targets were rearrangements of the four letters of the corresponding word targets. Distractor stimuli were homogeneous, four-letter nonword strings randomly selected from the letters of the alphabet not contained in the target stimulus. No popout effect was found under conditions of high featural overlap between targets and distractors. Under conditions of low featural overlap, a popout effect for both words and nonwords was found.

Lukatela, Georgije, & Turvey, M.T. (1991, November). Phonological access of the lexicon: Evidence from associative priming with pseudohomophones. *Journal of Experimental Psychology: Human Perception and Performance, 17*, 951–966.

Investigates, in four experiments, the phonological mediation hypothesis of dual processing theory. Experiments 1 and 2 both utilized 24 university psychology students as subjects and compared target naming latencies when subjects were primed with words that were either associated or not associated to target pseudohomophones. Experiments 3 and 4, respectively, utilized 24 and 60 psychology students as subjects and compared target naming latencies when subjects were primed with pseudowords that were either homophonically associated or not associated to the target words. ANOVA procedures applied to the latency data provided strong support for the phonological mediation hypothesis. Priming due to associated pseudohomophones did not differ significantly from priming due to associated words.

IV-6 Visual perception

Greaney, J., & MacRae, A.W. (1992, May). The order of visual processing: Top-down, bottom-up, middle-out, or none of these? *Bulletin of the Psychonomic Society, 30,* 255–257.

Examines the order in which visual information is processed. Ten students and staff members at a British university served as subjects. Using a tachistoscope, subjects received individual letters (global information) made up of smaller letters (intermediate information), each of which was made up of still smaller letters (local information). Letters at each level were different. Testing the hypothesis that letters viewed at an angle of 2° (intermediate information) would be identified faster, subjects were asked to indicate which letter was displayed. Reaction time was measured from the time the stimulus appeared to the time the subject pressed a button on the response panel. Results demonstrated the existence of confounding factors, suggesting that two-level and multilevel letter paradigms may not be good tests for level of processing.

Goodman, Gay; & Holland, Merle L. (1992, February). Alternate eye suppression and reading ability: Little or no effect. *Journal of Research in Reading, 15,* 3–11.

Examines the effects of alternate eye suppression on reading ability and timed visual-motor tasks. Subjects were 40 children, ages 6 to 14, selected from the patient population of four ophthalmologists. The 20 children assigned to the experimental group were all diagnosed as alternate eye suppressors, while the 20 assigned to the control group had normal vision. All subjects were administered both the WISC-R and the WRMT. A series of ANCOVA and MANCOVA in which the WISC-R Verbal IQ served as a covariate revealed no significant differences between the experimental and control groups' total reading scores or any of the WRMT subtest scores. No significant differences were found between the experimental and control groups' performance on the various WISC-R verbal and performance subtests. Findings support the contention that alternate eye suppressors are no more likely than visually normal children to experience difficulty with reading or visual-motor tasks.

Besner, Derek, & Smith, Marilyn Chapnik. (1992, May). Models of visual word recognition: When obscuring the stimulus yields a clearer view. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18,* 468–482.

Reports on two experiments examining the relation among stimulus quality, word frequency, and context during word recognition. Subjects for each experiment were 32 university students. For each experiment, subjects were shown 96 word pair stimuli, half of which were related-word pairs and half of which were unrelated. Displayed on a computer monitor at a subject's command, the first word of each pair (the prime) always appeared in clearly visible lower case letters, while the second word (the target) appeared in lower case letters that were degraded for half the trials. For Experiment 1, the stimulus onset asynchrony (SOA) between prime and target was long (1,250 ms), providing subjects with the opportunity to employ a prediction strategy in naming the target. For Experiment 2, the SOA was short (200 ms) elmininating subjects' ability to utilize a prediction. Instructions required the subjects to name the target as soon as possible after its appearance. ANOVA results for both experiments showed larger effects of degradation for unrelated terms than related ones, with context and degradation interacting strongly in both experiments. Findings support the contention that degradation influences context differentially.

IV-7 Reading and language abilities

Leal, Dorothy June. (1992, September). The nature of talk about three types of text during peer group discussions. *Journal of Reading Behavior*, *24*, 313–338.

Investigates first, third, and fifth grade children's peer-group discussions about text. Fifty-four children met in groups of six to hear the researcher read a storybook, an information book, and an informational storybook. The children then discussed the materials read in their groups. Transcripts were coded for the source of information mentioned in discussions (prior knowledge, peer-provided information, textual information, and combinations), the manner of topic maintenance, the acknowledgment given to preceding utterances, the thinking forms used, and the textual and extratextual elements in focus during each utterance. Significant grade level and text-type differences were found. Older students were more collaborative, drew more on prior and peer information, participated in longer discussions, and made more confirming and challenging responses. Discussions about informational storybooks produced more speculation and more links to extratextual information, used more peer information, and were generally longer than discussions about the other two materials.

Dahl, Karin L., & Freppon, Penny A. (1991). Literacy learning in whole-language classrooms: An analysis of low socioeconomic urban children learning to read and write in kindergarten. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 149–158). Chicago, IL: National Reading Conference.

Documents knowledge construction in reading and writing through learner patterns of behavior and compares these patterns to previous skills-based and whole language studies. Two whole language kindergartens with predominately low-SES children served as the sample pool. Twenty-four children who qualified for a free lunch program were randomly selected from the pool; 12 were chosen for in-depth study. At the beginning of the year, five tasks representing written language knowledge were administered and revealed that the children held a restricted view of written language. Half-day observations were made twice weekly during the school year. On each visit, all interactions, responses, utterances, and actions of one learner were recorded. Data included field notes, transcripts of audiotapes, and copies of learner papers. Three learner stances emerged which differed in degree of independence, frequency and quality of engagement, and attitude and motivation. Recurrent learner patterns are discussed relative to sense-making patterns. Findings are compared to previous studies of this nature.

Power, Brenda Miller. (1992). Rules made to be broken: Literacy and play in a fourth-grade setting. *Journal of Education*, *174*, 70–86.

Studies the relation between the social concerns of pupils, the structures used to encourage interactions between children, and the texts produced. Subjects were one fourth grade teacher and her class at an urban school. Qualitative data-collection procedures included taking field notes during morning reading and writing workshops, videotaping teacher-pupil interactions, conducting formal and informal interviews with the teacher and her pupils, and collecting children's work and teacher records. Data analysis indicated that many of the complex links between social networks and texts were revealed through the play activities of children. The specific play event described involved the activities of a detective agency formed by a group within the class. Written language was used to define roles, record events, organize information, and signify membership. The oral language vocabulary of investigative work was used to immerse children in the fantasy world of the detective agency.

Caravolas, Marketa, & Bruck, Maggie. (1993, February). The effect of oral and written language input on children's phonological awareness: A cross-linguistic study. *Journal of Experimental Child Psychology, 55*, 1–30.

Investigates the influence of oral and written input on the development of phonological awareness in children from two cultures. Subjects were 100 Czech and 101 English speakers from prekindergarten, kindergarten, and first grade. The contrasting abilities of Czech and English speakers was of interest because the two languages are significantly different: Unlike English, Czech possesses a highly transparent orthography and is characterized by a wider variation and frequency of complex syllabic onsets. All children were administered oral tasks of phonological awareness (same-different, sound isolation, and phoneme deletion) with words in the native and foreign language versions being counterbalanced within each language group; first graders were also administered a written nonword spelling task. Data revealed that Czech children possess higher levels of complex onset awareness than do English speakers, although the latter group did indicate greater sensitivity to simple onsets on one oral task. By the end of grade 1, the Czech children also demonstrated more advanced spelling abilities than the English speakers in the study.

Sparks, Richard L.; Ganschow, Leonore; Javorsky, James; Pohlman, Jane; & Patton, John. (1992, Summer). Test comparisons among students identified as high-risk, low-risk, and learning disabled in high school foreign language courses. *Modern Language Journal, 76*, 142–159.

Compares test performance on a variety of measures thought to be related to learning a foreign language for three populations of foreign-language learners: (1) students identified as low risk for learning a foreign language; (2) students identified as high risk, and (3) students identified as learning disabled who were enrolled in foreign-language courses. Eighty high school students enrolled in first semester foreign-language classes completed a 3-hour battery of tests to assess phonology, syntax, and semantics, as well as foreign-language aptitude, spelling, auditory conceptualization, letter and word identification, word attack, punctuation, capitalization, and rote memory. Significant differences were found among all groups of students on the measures of foreign-language aptitude and oral and written language. Results suggested that native-language–learning problems may create foreign-language–learning problems. Levels of proficiency in phonological and syntactic codes of the native language appeared to determine the extent of success in foreign-language learning, with more problems in foreign-language learning resulting from difficulties with these codes than from semantic difficulties.

Smith-Lock, Karen M. (1991, October–December). Errors of inflection in the writing of normal and poor readers. *Language and Speech, 34*, 341–350.

Investigates the speech and writing of second grade pupils in order to determine whether children make morphological errors in writing that they do not make in speech. Subjects were 18 normal and 11 poor readers, identified by scores on the MAT. Data were collected in February and March in 2 successive years of grade 2 classes. Ten oral and written sentences with complex syntactic structures were elicited from each participant. Each sentence provided opportunities for the children to omit, add, or substitute an inflection. All inflectional errors observed were omissions. No errors were made in the spoken task by either normal or poor readers. In the written task, good readers omitted an average of 0.4 inflections out of 20, whereas poor readers omitted an average of 7.6 inflections, a significant difference.

Sanders, Ted J.M.; Spooren, Wilbert P.M.; & Noordman, Leo G.M. (1992, January–March). Toward a taxonomy of coherence relations. *Discourse Processes, 15*, 1–35.

Advances a taxonomy that categorizes coherence relations into one of 12 classes by use of four cognitively salient primitives. The psychological plausibility of the taxonomy is then explored through two experiments. Subjects for Experiment 1, 14 discourse analysts, were given a set of 34 sentence pairs linked by coherence relations, along with a list of labels, short definitions, and examples of each relation in the taxonomy. They were than asked to choose one label from the list for each of the sentence pairs. Choices were analyzed to determine (1) whether there was strict agreement between the subject choice and the original relation, and (2) whether the choice was correct in terms of class agreement. Results showed that subjects' classifications of coherence relations agreed significantly with an a priori classification and supported the plausibility and applicability of the taxonomy. To determine whether the taxonomy correctly distinguished production behavior, Experiment 2 investigated the use of connectives by 15 university undergraduates. Subjects were given 32 sentence pairs with connectives removed. Subjects were asked to relate the sentence pairs by choosing from a set of 18 connectives. Results furnished further evidence of the cognitive salience of the taxonomic primitives and their relevance to the understanding of coherence relations.

Winn, William, & Solomon, Cliff. (1993). The effect of the spatial arrangement of simple diagrams on the interpretation of English and nonsense sentences. *Educational Technology Research & Development, 41*(1), 29–41.

Reports two experiments to verify that conventional spatial arrangements of diagrams are interpreted consistently and to examine the role of such arrangements in establishing meaning. Sixty-seven graduate students were presented with problem sets consisting of two sentences and a simple diagram showing a relation between two concepts. Respondents were asked to select the sentence that best described the meaning of the diagram. In the experiment where semantic content was replaced with nonsense names, subjects interpreted the diagrams using syntactic rules. Experiment 2 examined the relation between the appropriateness of the spatial arrangements in the diagrams and their semantic content. The subjects were 63 graduate students who were randomly assigned either to a group receiving English materials or to a group receiving nonsense materials. It was concluded that diagrams are read in the same way as text. Violations of the conventional arrangements of diagrams consistently led to ambiguity and lower confidence in interpretation but only when the concepts were known.

Stowe, Laurie A.; Tanenhaus, Michael K.; & Carlson, Greg N. (1991, October–December). Filling gaps on-line: Use of lexical and semantic information in sentence processing. *Language and Speech, 34*, 319–340.

Reports two experiments investigating how people assign an interpretation to question phrases. Two models were tested. In Experiment 1, 28 university students judged the meaningfulness of full sentences presented on a computer screen. Effects of plausibility of the WH phrase acting as an object appeared in just those cases in which the object role should have been assigned to that phrase according to the lexical expectation model, rather than as predicted by the all resorts model. In Experiment 2 with a different sample of 28 university students, these results were replicated using the word-by-word, self-paced reading paradigm. The plausibility effect showed up at the verb itself when it was normally used transitively. This evidence suggested that a gap is preferred even over a lexically filled object for transitive expectation verbs.

De Temple, Jeanne M., & Beals, Diane E. (1991, Fall–Winter). Family talk: Sources of support for the development of decontextualized language skills. *Journal of Research in Childhood Education, 6,* 11–19.

Reports findings regarding the home language environments of the preschool children in the Home-School Study of Language and Literacy Development. Home visits were conducted to collect interview data and to tape-record talk between child and mother during four specific activities: book reading, play with toys, elicited reports, and mealtime conversations. Characteristics of 39 mother-child dyads were examined, and profiles of three individual children are presented. Examination of coefficients of correlation between the measures of the four tasks revealed positive associations between several child performances in the four different activities. Measures of children's verbal involvement in three of the four tasks at the first home visit were positively correlated. The child with a high information index in play with toys tended to have a high information index during the reading of the familiar book and to engage in a high percentage of explanatory talk during mealtime. At the second home visit, the proportion of child talk involving explanations at mealtimes was again correlated with the play index, but it was also associated with two of the measures of children's spontaneous talk during elicited reports. These associations suggested some predictability in child language performance in different activities but also demonstrated that there are a number of different language components involved in these tasks.

Pléh, Csaba. (1990). Word order and morphophonological factors in the development of sentence understanding in Hungarian. *Linguistics, 28,* 1449–1469.

Summarizes the findings of several experiments examining sentence comprehension in Hungarian preschool children. Experiments discussed explain the presence of order-related sentence-interpretation strategies and document their application in a language in which the order of sentence constituents is essentially free. Results show that Hungarian preschoolers do utilize supplementary order-based strategies for sentence interpretation to an overgeneralized extent, applying them even to sentences in which case markings are clearly detectable. Results also show that order-based strategies are more likely to be used in situations when (1) case markings are not present due to the structural possibilities of the language, or (2) case endings are difficult to identify, as in transitive sentences.

Tunmer, William E. (1989). The role of language-related factors in reading disability. In Donald Shankweiler & Isabelle Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 91–131). Ann Arbor, MI: University of Michigan Press.

Describes a 2-year longitudinal study intended to determine the roles of phonological and syntactic awareness in the beginning stages of learning to read. First, several views regarding the role of language-related factors in reading disability are examined. It is then suggested that poor metalinguistic ability may be responsible for difficulties in learning to read. The study included 100 children nearing the end of first grade who were individually administered tests of phonological and syntactic awareness, the PPVT, a test of decentration ability, and four subtests of the Interactive Reading Assessment System (real-word decoding, pseudoword decoding, listening comprehension, and reading comprehension). The same tests were administered to the 84 children remaining at the end of grade 2. Coefficients of correlation between syntactic awareness and reading and listening comprehension were .42 and .56, respectively, at the end of first grade and were higher than the coefficients found between phonological awareness and reading and listening comprehension. Results at the end of second grade were similar. Other results were interpreted as suggesting that both metalinguistic abilities were important for acquiring knowledge of grapheme-phoneme correspondences. In addition, it was felt that findings indicated that deficient metalinguistic ability in beginning readers is the result of a developmental lag in decentration ability.

HANSON, VICKI L. (1989). Phonology and reading: Evidence from profoundly deaf readers. In Donald Shankweiler & Isabelle Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 69–89). Ann Arbor, MI: University of Michigan Press.

Considers evidence from studies with deaf college students indicating that successful deaf readers can access phonological information about words and that they use this knowledge in reading. It is then argued that the finding of phonological processing by deaf readers supports the importance of phonological sensitivity in the acquisition of skilled reading by both hearing and deaf readers.

SENSENBAUGH, ROGER. (1992, Summer). Reading and communication skills. *Ohio Reading Teacher, 26,* 22–24.

Reviews research entries and practical articles in the ERIC database on the uses of journal writing for teaching reading and writing.

SHEARER, BRENDA. (1992, Summer). From Dick and Jane to Ken and Yetta: How did we get here? Tracing the roots of whole language. *WSRA Journal, 36,* 1–5.

Reviews the literature supporting a holistic view of literacy learning. The discussion suggests that research in developmental learning, oral-language development, reading, writing, and evaluation have contributed to new understandings of the nature of reading and writing.

IV-8 Vocabulary and word identification

NAGY, WILLIAM E.; DIAKIDOY, IRENE-ANNA; & ANDERSON, RICHARD C. (1993, June). The acquisition of morphology: Learning the contribution of suffixes to the meanings of derivatives. *Journal of Reading Behavior, 25,* 155–170.

Investigates 630 fourth graders, seventh graders, and high school students' knowledge of the meanings of common English derivational suffixes and how this knowledge develops and contributes to understanding of word meaning. Subjects were asked to choose sentences that correctly used a suffixed word from a list of several sentences. Suffixed words had familiar stems and suffixes but combined them to make new or rarely occurring derivatives. Students were also tested on familiar nonsuffixed words. Results suggested that there is a significant growth in knowledge of suffix meanings as the grades increase, with greatest changes occurring between fourth and seventh grades. Students performed better on stem items than on derivative items. Significant grade x suffixation interactions were found. Findings led the researchers to question the common practice of teaching the meaning of derivational suffixes through definitions.

NICHOLSON, TOM, & WHYTE, BARBARA. (1992). Matthew effects in learning new words while listening to stories. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 499–503). Chicago, IL: National Reading Conference.

Reexamines the nature of "the rich get richer" effects for children of different levels of reading ability in learning new words incidentally by listening to one story. Subjects were 57 8- to 10-year-olds from a suburban school. Each age group had similar numbers of subjects at below-average, average, and above-average reading levels. Ten words selected from the story were tested both in and out of the story context. Each child was interviewed about word meanings and was asked to retell the story. Responses were scored correct if word meaning given was reasonably accurate. Retellings were rated on 5-point scale. Only the above-average readers gained significantly in incidental learning. Even when children revisited the story context, gains favored the better readers. Evidence from this study challenges an earlier study that found that children with less vocabulary knowledge can gain as much as those with better knowledge by listening to stories.

MEALEY, DONNA L.; KONOPAK, BONNIE C.; DUCHEIN, MARY A.; FRAZIER, DIEDRA W.; HOST, TIMOTHY R.; & NOBLES, CONNIE. (1992). Student, teacher, and expert differences in identifying important content area vocabulary. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 117–123). Provo, UT: College Reading Association.

Compares content words chosen by college students, classroom teachers, and a content area expert. Participants were 10 undergraduates enrolled in a developmental reading course, 10 secondary teachers and college instructors, and a professor of education who specialized in U.S. history. A 600-word passage was taken from a college-level U.S. history textbook. The passage was free of typographical cues but contained one photograph and one map. Subjects were asked to read the passage and select important content words necessary for understanding. The history expert was required to list all the words perceived as important while the other two groups were limited to three words. Findings indicate that experts and novices have different views of word importance: the history expert chose mainly content-specific terms, the teachers selected general vocabulary words, and the students chose a combination of the two. Differences appear to be attributable to the level of prior knowledge of the subject.

BRIGGS, L.D., & RICHARDSON, W.D. (1993). Children's knowledge of environmental print. *Reading Horizons, 33*, 224–235.

Determines the type and number of words in the environmental-print vocabularies of a random sample of second grade pupils. Subjects were 24 boys and 22 girls who represented lower, middle, and upper socioeconomic classes. All attended the same elementary school located in an affluent, urban setting. To determine which words composed their environmental-print vocabularies, the children were asked to write all the words that they remembered seeing in their environment. This yielded 407 words which were arbitrarily divided into nine categories: stores (111), meat (59), vegetables (46), fruits (44), desserts (37), road signs (34), other grocery items (31), drinks (28), and miscellaneous (17). The number of different items within each category was also tabulated.

BISHOP, ROBYN R. (1992, Fall). An experiment with the power of mnemonics. *Contemporary Issues in Reading, 8*, 45–47.

Tests the effect of using imagery-based mnemonic techniques on students' ability to learn vocabulary. Subjects were 17 students in one 11th grade remedial English class. Their reading levels ranged from 4th to 10th grade. Fifteen vocabulary words were chosen from a class novel. The researcher created visual images for 12 of the words, which were then drawn by art students. The word, the image, and the definition were presented to students on an overhead transparency. Students created their own images for the final three words based on class discussion. Immediate and 2-week delayed retention were tested on a matching quiz and a sentence-writing task. The mean scores were 100% on the immediate test and 98% on the delayed measure.

Levin, Joel R.; Levin, Mary E.; Glasman, Lynette D.; & Nordwall, Margaret B. (1992, April). Mnemonic vocabulary instruction: Additional effectiveness evidence. *Contemporary Educational Psychology, 17*, 156–174.

Compares the efficacy of mnemonic and contextual vocabulary-learning strategies. In Experiment 1, 90 seventh and 105 eighth graders generated either strategy in individual or small group learning formats. In Experiment 2, 42 seventh and 57 eighth graders were explicitly taught vocabulary words through mnemonic sentences or sentence context in individual or in small group learning formats. Experiment 3 had small groups of 53 fourth graders generate either strategy. In Experiment 4, 52 third and 22 fourth graders were assigned to three instructional conditions in which they studied vocabulary individually or in pairs using the mnemonic strategy, the sentence-context strategy, or their own best method. For each experiment, the comparative efficacy of the instructional strategies was evaluated through immediate or delayed retention measures of definition recall through tests requiring the use of the target words in a sentence. Statistical analyses performed on the data revealed the superiority of the mnemonic strategy over the sentence-context strategy on all measures, regardless of whether the strategy had been carried out individually, in pairs, or in small groups.

Gordon, Jane; Schumm, Jeanne Shay; Coffland, Cynthia; & Doucette, Martha. (1992, April–June). Effects of inconsiderate versus considerate text on elementary students' vocabulary learning. *Reading Psychology, 13*, 157–169.

Asks if elementary pupils' learning of unfamiliar vocabulary is enhanced by reading content area textbook selections rewritten to be reader friendly. Subjects were 38 fifth graders at a university laboratory school. Children were grouped into high and average achievement levels based on their performance on the SAT. Pupils read two selections from an elementary social studies text in one of two versions: one version presented content area vocabulary in naturally occurring but inconsiderate sentence contexts; the other presented the same words in sentence contexts rewritten to conform to four criteria for considerate text—completeness, explicitness, proximity, and clarity of connection. Children were administered a pretest of prior vocabulary knowledge and posttests of learned vocabulary. Repeated measures ANOVA procedures applied to the data indicated that the content area vocabulary of elementary children in both achievement groups was improved by reading the revised texts. The performance of the high ability group was superior to that of the average ability group on all measures.

King-Sears, Margaret E.; Mercer, Cecil D.; & Sindelar, Paul T. (1992, September/October). Toward independence with keyword mnemonics: A strategy for science vocabulary instruction. *Remedial and Special Education, 13*, 22–33.

Explores the use of keyword mnemonics in two of three instructional procedures taught to students with mild handicaps. The subjects were 30 LD children and seven children with emotional or behavioral disorders in the sixth, seventh, and eighth grades. Children were taught by special education teachers during their English, reading, or language arts period. Three teachers and their pupils were randomly assigned to one of three treatments:

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systematic teaching, an imposed keyword method, and an induced keyword method. Instructional time was identical for each treatment. Pupils were required to learn and remember definitions of previously unfamiliar science terms. Learning was assessed on two measures: a written definitions test (production) and a matching definitions to terms test (recall). These tests were given 1 day after each week's instruction, 1 week after all instruction had ended, and 3 weeks after all instruction had ended. Group means on the last 3 weeks of instruction were analyzed using repeated measures ANCOVA. IQ was the covariate, and written and matching performances were analyzed separately. A second analysis used the 12 words taught during the fourth week of instruction. Three scores (from the fourth week of instruction, 1 week after instruction, and 3 weeks after instruction) were analyzed in a repeated measures ANCOVA by deriving scores on the words from the 48-word written and matching measures. Results revealed that during the fourth week of instruction, there was a significant difference in performance on the written measures favoring the imposed keyword condition. Likewise, on the follow-up of the 12 words taught during the fourth week, the mean scores of the imposed keyword condition and the induced keyword condition were significantly greater than the systematic teaching condition.

LEUNG, CYNTHIA B. (1992). Effects of word-related variables on vocabulary growth through repeated read-aloud events. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 491–498). Chicago, IL: National Reading Conference.

Explores the importance of six word-related variables on the incidental learning of vocabulary from read-aloud events. Participants included 24 children randomly selected from eight kindergarten and first grade classrooms in a suburban public school. All children were within an average range of language development on the WPPSI. Children were read a storybook and were asked to retell or pretend to read the story from a modified version containing only pictures. The read-aloud and story retelling of the same story were repeated two times the same week and again using a second story the next week. Retellings were transcribed and target words used were scored on a 5-point scale. An open-ended vocabulary test to assess knowledge of target words was administered before and after the 2 weeks of read-aloud events. Results suggested that word-related variables of target words in storybooks read aloud to children can significantly influence incidental learning of vocabulary. As children retold the stories for the second and third time, they tended to use more words related to familiar concepts. Immediate retellings helped children learn some words not essential for understanding the basic plot of the story. Reasonable contextual support appeared important for vocabulary growth as well. Because the words were used in the same context presented during the read-aloud, children did not need to understand a word completely before they used it in their own version of the story. The results of the study show the importance of understanding the developmental nature of the way children talk about words.

PARRY, KATE. (1991, Winter). Building a vocabulary through academic reading. *TESOL Quarterly, 25*, 629–653.

Describes a series of longitudinal case studies designed to explore how university ESL learners build their vocabularies relative to one area of study. Subjects were four undergraduate students enrolled in an anthropology course who had participated in the university's ESL sequence of study and who had received at least a secondary education in their own country. Subjects were asked to keep a list of any words they encountered in the anthropology textbook that caused them difficulty. They were also asked to write down what they guessed the meanings to be, using their first language if doing so made the task easier. If they chose to look the words up in the dictionary, they were also asked to record the definitions. Examination of the lists suggested correspondence between how much the students read and how many words they knew. Counts also revealed that the number of anthropology-specific words was very small. A much larger proportion of each student's words consisted of bridging vocabulary, general items that characterize formal prose and often express relationships or other abstractions. While the students' lists showed some common patterns in the type of words included, there was little actual overlap. Each student recorded a substantial proportion of correct glosses and got more than half at least partly correct. The students appeared to depend on context for hypothesizing meaning, even though they sometimes used intralingual cues. Finally, it appeared that subjects had different reading and working strategies, and these strategies may have affected the way in which they learned new words.

MOORE, JOHANNA C., & SURBER, JOHN R. (1992, July). Effects of context and keyword methods on second language vocabulary acquisition. *Contemporary Educational Psychology, 17*, 286–292.

Investigates the effect of context and keyword methods on the acquisition of German as a second language. English-speaking college students in first-, second-, and third-year German classes were assigned to one of three vocabulary-learning conditions: semantic context, keyword treatment, or control. Twenty-four German words were selected, each with a concrete meaning that would have an imageable English translation and a concrete keyword. In the keyword group, subjects learned how to form the mental image that would link the keyword and the target word. In the context condition, subjects were instructed in how to attend to contextual clues to help them learn the meanings. Experimental sessions were presented via computer with a self-paced written test on completion of all materials. While both semantic context and keyword treatment conditions facilitated the recall of a German word to fit a German context sentence on both the immediate and 3-week delayed tests, the context group was not superior to the keyword group.

LAUFER, BATIA. (1992, September). Reading in a foreign language: How does L2 lexical knowledge interact with the reader's general academic ability? *Journal of Research in Reading, 15*, 95–103.

Seeks answers to two research questions: (1) To what extent is reading comprehension in L2 influenced by the level of L2 vocabulary and general academic ability? (2) To what extent is reading comprehension in L2 influenced by general academic ability and different vocabulary levels? Subjects were 64 first-year university students; 46 were L1 speakers of Hebrew and 18 had Arabic as their L1. Measures studied were vocabulary size scores as assessed by the Vocabulary Levels Test, general academic ability scores, and L2 reading comprehension scores taken from university entrance exams. Significant coefficients of correlation were found between L2 reading comprehension and lexical level and between L2 reading comprehension and general academic ability. Differences were noted by lexical level. With vocabulary size of fewer than 3,000 word families, no amount of general academic ability influenced reading in a satisfactory manner. If the L2 learner possessed a vocabulary of 5,000 words, results in L2 reading were strong, regardless of general academic ability. If the L2 learner scored at the 3,000–4,000 lexical level, L2 reading might be influenced by general academic ability. Knowledge of 3,000 word families appears to be the lexical threshold of reading comprehension necessary for success in L2. Lexical level appears to be a better predictor of reading success in L2 than does the learner's general ability.

GOUGH, PHILIP B., & JUEL, CONNIE. (1991). The first stages of word recognition. In Lawrence Rieven & Charles Perfetti (Eds.). *Learning to read: Basic research and its implications* (pp. 47–56). Hillsdale, NJ: Erlbaum.

Bases stages in growth in word recognition on research done primarily by the authors, but also by other researchers. In the authors' point of view, the first stage of word recognition is accomplished through paired-associate learning. A second stage is identified as a transition in which the orthographic cipher (knowledge of the letter-sound correspondences of an alphabetic language) is internalized by a process termed cryptanalysis. Children then need to learn the cipher. Early mastery of the cipher is deemed to be a critical step in the acquisition of reading. Children who master the cipher in first grade will be successful readers by the time they reach grade 4, whereas children who have not mastered the cipher will remain poor readers 3 years later. With the acquisition of the cipher, the first stage in word recognition is complete.

BALOTA, DAVID A. (1990). The role of meaning in word recognition. In David A. Balota; G.B. Flores d'Arcais; & K. Rayner (Eds.), *Comprehension processes in reading* (pp. 9–32). Hillsdale, NJ: Erlbaum.

Identifies and discusses a number of assumptions implicit in word-recognition research. First the author discusses the research related to the point when a word has been recognized but meaning has not as yet been accessed. The author questions the empirical research underlying this point, suggesting that the tasks used to provide data regarding this moment involve characteristics that raise questions about the utility of these tasks as pure reflections of word processing. It is argued that there are no unequivocal data indicating that one can develop a word-recognition task free of meaning. An alternative framework is then suggested, emphasizing the functional utility of words in language processing. Next, research that supports the conclusion that meaning can contribute to components involved in early word processing is discussed. A final section discusses how meaning might be incorporated into current theoretical stances of word processing.

BRUCK, MAGGIE, & TREIMAN, REBECCA. (1992). Learning to pronounce words: The limitations of analogies. *Reading Research Quarterly, 27*, 375–388.

Studies the degree to which teaching beginning readers to use various types of analogies helps them pronounce words and nonwords. Subjects were 39 first grade children identified as ready to learn to read by scores on four screening tasks: WJPEB letter-word identification task, a letter-sounds test, reading 10 CVC clue words, and reading 20 CVC nonwords. Subjects were randomly assigned to one of three training procedures to learn the use of analogies in pronouncing unknown words: rime training, CV training, or vowel training. Following the completion of successful analogy training trials, each subject was given a retention test (pronouncing 10 target words without seeing the clue words) and a generalization test (pronouncing 20 nonwords derived from the clue words). Training effects were assessed on the retention and generalization tests and on the number of trials to learn the target words. ANOVA procedures and planned comparisons were used to examine main effects. Results indicated that the children in the rime group learned the new words fastest but remembered fewer words than the children in the other two groups. The children in the vowel group performed best on a generalization test consisting of nonwords. The rime- and CV-trained children did not transfer their analogy strategies to the generalization test.

PETERSON, MARGARETH E., & HAINES, LEONARD P. (1992, March). Orthographic analogy training with kindergarten children: Effects on analogy use, phonemic segmentation, and letter-sound knowledge. *Journal of Reading Behavior, 24*, 109–127.

Ascertains the conditions under which reading instruction will foster segmentation ability in beginning readers. Subjects were 48 kindergartners of at least average ability and at the preliminary stages of reading based on their performances on the PPVT-R and the letter-identification and word-identification subtests of the WRMT-R. Subjects were classified as high, middle, or low segmenters based on their performance on the Test of Awareness of Language Segments and then assigned to an experimental or control group in a manner that ensured group equivalency on segmentation ability. Prior to training, subjects were administered pretests of letter-sound knowledge, segmentation skill, and word recognition by analogy. Individual orthographic analogy training given to children in the experimental group consisted exclusively of instruction in 10 different name units, each presented with a variety of onsets according to a fixed procedure. Training took place in 15-minute sessions for a maximum of seven sessions over a 1-month period. The control group received instruction according to the regular kindergarten curriculum. At the conclusion of the training period, all children were administered the letter-sound knowledge, segmentation skill, and word-recognition-by-analogy tasks as posttests. Repeated measures ANOVA procedures applied to the various sets of data revealed significant gains for the experimental group on all measures, as compared to gains made by the control group. Analogy training affected low, middle, and high segmenters differently, however: low segmenters showed great improvement in segmentation ability with small but significant effects in letter-sound knowledge; middle and high segmenters gained most in letter-sound knowledge and in ability to achieve on the word-reading-by-analogy task.

Bear, Donald R., & Barone, Diane. (1991). The relationship between rapid automatized naming and orthographic knowledge. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 179–184). Chicago, IL: National Reading Conference.

Investigates differences between beginning readers in the letter-name stage of spelling and transitional readers in the within-word-pattern stage. The sample included 19 average to above-average readers from a multigrade classroom (grades 1–3) and 23 children (ages 7 to 10) enrolled in a summer reading program because of their reading difficulties. Subjects were tested individually over a 2-day period on naming tasks (letter, generative), a spelling-by-stage assessment, and the GMRT. Results indicate that orthographic knowledge, rather than age or grade, was the critical variable in the speed of letter naming. The instructional utility of the spelling-by-stage assessment device is discussed.

Barker, Theodore A.; Torgesen, Joseph K.; & Wagner, Richard K. (1992). The role of orthographic processing skills on five different reading tasks. *Reading Research Quarterly, 27*, 334–345.

Examines the role of orthographic processing skills on five types of reading measures: nonword reading, untimed isolated word identification, timed word identification, oral reading rate for text, and silent reading rate for text. Subjects were 87 third graders from one rural/suburban elementary school. Scores on two measures of orthographic-processing skill, an orthographic-choice task, and a homophone-choice task, were entered into a series of hierarchical regression analyses after age, IQ, and scores on phonological ability measures from a phonological-choice task and a phoneme-deletion task. Orthographic skills contributed independently and significantly to each type of reading, with contributions stronger for reading of text than for reading of isolated words. After differences in past reading experiences were partialed out of the regression equations, variations were still significant. There were no consistent trends showing orthographic skills to be more independent from phonological skills in poor readers than in good readers.

Roberts, Maura L.; Turco, Timothy L.; & Shapiro, Edward S. (1991, December). Differential effects of fixed instructional ratios on students' progress in reading. *Journal of Psychoeducational Assessment, 9*, 308–318.

Tests how using differently fixed ratios of known and unknown words during vocabulary instruction affects reading performance. Participants were 42 second through fifth grade pupils considered to be low-average to average in reading ability according to CTBS results. Children were rank-ordered on entry word-recognition performance and assigned, in turn, to one of four intervention conditions in which words were presented in unknown to known ratios of 1 to 9, 2 to 8, 4 to 6, and 5 to 5. Flashcard drill procedures within specified instructional ratios were employed three times weekly over an 8-week period, with 10 words being presented during each session. Pre- and postintervention data were obtained on oral reading fluency, passage comprehension, and words recognized on grade-level word lists. Biweekly measures of oral reading fluency were also obtained during the intervention phase. Results of ANOVA procedures applied to the data suggested that while children in all ratio conditions made progress on all dependent variables, those in the 5 to 5 and the 4 to 6 conditions learned significantly more words than did those in the other two treatment groups. Pupils in the 5 to 5 and 4 to 6 conditions had the opportunity to cover more instructional material than did those in the other conditions. Considering this, analyses applied to the word list posttest indicated that children in the 1 to 9 and 2 to 8 ratio conditions showed the greatest amount of learning beyond what was actually taught.

Shefelbine, John, & Calhoun, Joanne. (1991). Variability in approaches to identifying polysyllabic words: A descriptive study of sixth graders in highly, moderately, and poorly developed syllabication strategies. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 169–177). Chicago, IL: National Reading Conference.

Describes and contrasts the performances and strategies of 36 sixth graders trying to read difficult polysyllabic words in isolation. The sample was taken from a pool of 71 middle schoolers across four classes who represented high, moderate, and low syllabication abilities. Using the word-identification subtest of the WRMT, the last 10 polysyllabic words that were not identified by each child were recorded to total 360 words across the three ability groups. Attention to and the correct reading of word syllables, consonants, and vowels, as well as errors, omissions, and substitutions were analyzed. More proficient decoders were more likely to attend to and use final syllables and suffixes as well as consonant and vowel information. Misread words often were decoded but incorrectly pronounced. Children had an easier time identifying syllables at the beginning and end of words rather than those in the middle. Moderate and low ability pupils made less use of suffixes than of prefixes. Consonants received more attention than vowels.

Perfetti, Charles A., & Bell, Laura. (1991, August). Phonemic activation during the first 40 ms of word identification: Evidence from backward masking and priming. *Journal of Memory and Language*, *30*, 473–485.

Addresses the mediating effects of a word's phonological features in its identification. Experiment 1 examined the time course of phonemic and graphemic masking on the identification of words controlled for frequency and spelling consistency. Ninety undergraduates were exposed to words that were (1) high frequency and consistent, (2) high frequency and inconsistent, (3) low frequency and consistent, or (4) low frequency and inconsistent. Duration of exposure varied in increments of 35, 45, and 55 ms. Each target word, printed in lowercase letters, was immediately followed with one of three masks printed in uppercase: a phonemic mask that was homophonic to the target, a graphemic mask having the same number of letters but not homophonic to the target, or a control mask having no letters and little phonemic commonality with the target. Following exposure to the mask, subjects wrote the target word that had been exposed. ANOVA results indicated that the percentage of target identifications increased linearly with target exposure durations. Graphemic masks produced more accurate target identifications than control masks, and phonemic masks produced more accurate identifications than graphemic ones. Consistent spelling patterns produced more accurate identifications than inconsistent patterns, and high-frequency words tended to be identified more often than low frequency words. Experiment 2 provided baseline data on the time course of recognition (without masking) for the four types of targets used in Experiment 1, and thus demonstrated that masking does, in fact, impair word identification. Experiment 3 utilized 135 subjects and focused on resolving contradictory results of word-identification studies that used priming as opposed to backward-masking paradigms. The design and materials for Experiment 3 paralleled those for Experiment 1, but pseudowords used as backward masks were used as primes. ANOVA results showed that graphemic and phonemic priming promoted word recognition similarly at increments up to and including 35 ms. Together, the masking and priming results of this study provide strong evidence for early phonemic activation processes.

COLTHEART, VERONIKA, & LEAHY, JUDI. (1992, July). Children's and adults' reading of nonwords: Effects of regularity and consistency. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 718–729.

Examines the effects of grapheme-phoneme (G-P) regularity and consistency on children's and adults' approaches to reading nonwords. Subjects were two groups of 26 first graders and single groups of 26 second and third graders from a suburban public school. An additional group of 26 first-year behavioral science college students served as subjects in fulfillment of a course requirement. Stimuli presented to each subject were monosyllabic words and nonwords ranging in length from three to six letters and varying in regularity and consistency. Stimuli were displayed one at a time on a monitor interfaced with a clock and voice-activated microphone, and subjects were told to respond orally to each stimulus as soon as possible after it was displayed. Testing of first graders was conducted at midyear and at the end of the year while testing at other levels was conducted at the end of the year only. Responses were scored as accurate or inaccurate, with accurate responses being classified according to whether they represented regular or some type of irregular implementation of G-P principles. Across-grade comparisons of correct responses and response latencies for correctly read stimuli were determined through ANOVA procedures. Findings showed that children had a good grasp of G-P correspondence knowledge by the end of first grade. Increased use of larger orthographic correspondence rules as well as faster reaction times were evident by the end of grades 2 and 3, although regular implementation of G-P principles governed most responses. Adults also relied on G-P rules when reading nonwords and were quicker and more accurate in applying the rules. Heavy reliance on G-P rules was observed through first and second grade children's tendency to regularize exception words, although children in grades 2 and 3 gave more irregular pronunciations of nonword responses than children in grade 1.

COLTHEART, VERONIKA; AVONS, S.E.; MASTERSON, JACQUELINE; & LAXON, VERONICA J. (1991, July). The role of assembled phonology in reading comprehension. *Memory and Cognition, 19*, 387–400.

Assesses the influence of assembled phonology in printed sentence comprehension. Subjects for the four experiments were 23, 32, 34, and 60 students and staff from an urban polytechnic college, respectively. In Experiment 1, subjects judged the acceptability of sentences containing inappropriate homophones of three types: regular word, nonword, and exception word in which irregular words were regularized according to principles of assembled phonology in order to make the sentence sound correct. Subjects' response times and judgment errors were recorded. ANOVA procedures applied to the data revealed the occurrence of significantly more judgment errors and slower reaction times with sentences containing regular homophones than with sentences containing exception words and nonwords, respectively. Error rates for nonword homophones were low and not significant. Experiment 2 was similar to Experiment 1 in task and conditions, but regular and exception-word homophones in unacceptable sentences utilized in Experiment 1 were altered to make them acceptable. Results showed that the findings of Experiment 1 did not stem from differences in the sentence constructions used in that experiment. In Experiment 3, subjects judged the acceptability of sentences containing low- and high-frequency exception-word homophones. ANOVA performed on the data produced significantly higher error rates only for low-frequency exception-words. Experiment 4 differed from the three previous experiments in two ways: (1) subjects were provided with explicit instruction to judge whether all words in a given sentence were correctly spelled, and (2) the proportion of trials containing inappropriate homophones or spelling controls was altered. ANOVA results showed that task conditions affect error rates for nonword homophones. Results support the contention that assembled phonology contributes to sentence and word comprehension.

Pollatsek, Alexander; Lesch, Mary; Morris, Robin K.; & Rayner, Keith. (1992, February). Phonological codes are used in integrating information across saccades in word identification and reading. *Journal of Experimental Psychology: Human Perception and Performance*, *18*, 148–162.

Demonstrates through two experiments that phonological information obtained on one fixation of a word in the parafovia is used to aid identification of that word when it is fixated on again. Subjects for Experiments 1 and 2 were 10 and 40 members of a university community, respectively. All subjects had normal uncorrected vision and all were paid for their participation. Although the experiments used different paradigms, controls, and dependent variables, results of both taken together showed that previewing a homophone of a target word in the parafovia aids in processing of the target word on the next fixation—more so than previewing of a word matched with the homophone in visual similarity to the target. Time to name the target word and fixation time on the target while silently reading a sentence were shorter with homophone previewing. However, visual similarity of the preview did account for some facilitation, suggesting that codes other than phonological ones are preserved across saccades.

Holmes, V.M., & Ng, E. (1993, April). Word-specific knowledge, word-recognition strategies, and spelling ability. *Journal of Memory and Language*, *32*, 230–257.

Compares good and poor adult spellers on the use of word-specific information (Experiment 1), word-recognition strategies (Experiments 2 and 3) and spatial-order processing (Experiment 4). Two groups of 18 psychology students participated in the study as part of the course requirements. Students were chosen from a larger sample pool based on their spelling ability on the spelling subtest of the English Skills Assessment Test. The spelling-production test consisted of randomized words (two sets that varied by spelling condition, frequency, and length) placed in the context of oral sentences. The test word was then repeated, and students wrote it down. Poor spellers appeared to be less aware of orthographic rules and morphological relations that might assist their spelling. The largest difference between the groups was on idiosyncratic words whose spelling appears to rely on rote visual memory and word-specific information. In Experiment 2, subjects (32 from Experiment 1) were presented with words and nonwords and were asked to indicate whether the letter string formed a real word. Results showed that poor spellers had no apparent difficulties in processing high-frequency words but were less successful with unfamiliar words, even those with regular spellings. Experiment 3 made changes in the order of letters in words and nonwords. Poor spellers again processed familiar, regularly spelled words with ease. Changes in the middle of words were more disruptive than at the beginning or end;

however, poor spellers often failed to notice the change at all. In Experiment 4, different sets of regularly spelled words, nonwords, and symbol strands were devised to isolate processing factors. Results indicated that poor spellers' inefficient processing is isolated to orthographic information and that poor spelling results from a partial-analysis word-recognition strategy.

Srinivas, Kavitha; Roediger, Henry L., III; & Rajaram, Suparna. (1992, May). The role of syllabic and orthographic properties of letter cues in solving word fragments. *Memory & Cognition, 20*, 219–230.

Determines, in two experiments, the role of phonological and orthographic letter features in retrieving words from the mental lexicon. Subjects were 32 (Experiment 1) and 56 (Experiment 2) undergraduates participating for partial fulfillment of a course requirement. Using a crossword-puzzle–solving paradigm, subjects were given semantic cues and asked to solve fragmented words. Phonological features of given letters were ordered to correspond with syllables or nonsyllables in words. Orthographic features of given letters were controlled by selecting letter groups that occur either frequently or infrequently in English. Repeated measures ANOVA applied to the data for both experiments confirmed observations of little or no effect for the phonological variable but a reliable effect for the orthographic variable. Letter cues that occur infrequently better facilitated solving of word fragments.

Carr, Thomas H. (1992, Summer). Automaticity and cognitive anatomy: Is word recognition "automatic"? *American Journal of Psychology, 105*, 201–237.

Discusses recent advances in neural imaging technologies that have greatly facilitated measurement of cognitive-processing activity within the human brain as subjects perform specified tasks. Applications as they relate to issues of attention and automaticity in word recognition are illustrated and implications for future research are proposed.

IV-9 Factors in interpretation

Lehr, Susan S. (1991). *The child's developing sense of theme: Responses to literature*. New York: Teachers College Press.

Focuses on three studies in which the author researched various aspects of children's developing sense of theme and their response to literature. In the first study, 20 children were selected from a kindergarten, second grade, and fourth grade on the basis of scores obtained on the Revised Huck Literature Inventory. Children came from one school located in a middle-class suburb. Ten children at each grade level had scored high on the inventory; 10 had scored low. Three books in each of two genres—realistic fiction and folktales—were selected and read to children in small groups. After listening to three books of one genre read during one session, children were asked to draw a picture about two of the stories they felt had the same theme or told about the same idea. Children were then interviewed individually relative to various aspects of the books. At all grade levels, children identified realistic books with shared themes 80% of the time and folktales only 35% of the time. The two older groups made the same selections as adults had done more often than the kindergarten children were able to. Children with low exposure to books, as identified by the inventory, most often replied at levels too concrete or too vague to be counted as thematic responses. With increasing age, children were better able to discuss themes. Most kindergartners were able to summarize a story; most were also aware of the internal motivations or reactions of characters. Study 2 researched the ability of 10 4-year-olds to identify and generate themes for children's stories. None of the children were able to summarize the story, but some were able to retell it when using the book as a guide. None were able to generate theme statements, but most were able to talk about thematic elements. Most related the book experience to life experience. In the third study, kindergarten, second, and fourth grade children's interpretation of theme was explored by asking them to draw a picture describing the book that had been read to them. Pictures were captioned and the stories retold. It was concluded that allowing children the opportunity to explore stories in diverse ways extended their responses to the books.

Schweigert, Wendy A. (1991, July). The muddy waters of idiom comprehension. *Journal of Psycholinguistic Research, 20*, 305–314.

Tested the idiomatic-processing model of idiom comprehension by comparing processing time for familiar and less familiar idioms used figuratively and literally. The subjects were 21 university undergraduates. Sentence type (literal or figurative) and familiarity (familiar or less familiar) were within-subjects factors. Following presentation of all the stimuli, each subject completed a cued-recall task. Results indicated that control sentences required fewer presentations per syllable to be read than all sentences except those with less familiar idioms used literally. Sentences with less familiar idioms used literally required fewer presentations than those with less familiar idioms used figuratively and those with familiar idioms used literally. In order to investigate cued recall, percentages of phrases and words recalled were entered into ANOVAs which indicated significantly greater recall of both types for familiar idioms than for less familiar idioms. Difference in sentence type was not significant. The results do not lend clear support for any of the current models of idiom comprehension.

Needham, William P. (1992, January). Limits on literal processing during idiom interpretation. *Journal of Psycholinguistic Research, 21*, 1–16.

Investigates the extent to which literal processing occurs in comprehending figurative idiomatic expressions. Undergraduate students were the subjects. Each of 18 experimental passages consisted of five full sentences and a sixth partial sentence followed by a test item. Taken together, these sentences told a story involving a scene, primary character(s), and specific activities performed by the primary character(s). The three versions were identical except for the final noun of the target phrase. Of the 18 experimental passages, 6 constituted idiom passages, 6 constituted anaphor passages, and 6 constituted control passages. All passages were presented on a CRT. The two dependent measures were response time and error rate for the verification of the presence of the test word in the passage. For each, a repeated measures ANOVA was performed. There were no significant differences in response times across conditions; however, there was a significant main effect for error analysis across conditions. Results of the Bonferroni *t* test indicated that the error rate for the anaphor condition was significantly lower than that for either the idiom condition or the control condition. The author concludes that the mention of the subordinate anaphor did cause its referent and the accompanying material in the same sentence to be activated. The hypothesis that people do not necessarily complete all stages of literal processing of idiomatic expressions is supported by the study's results.

Zapp, Lynette; Straw, Stanley B.; Baardman, Sandy P.; & Sadowy, Pat. (1992, Summer/Fall). Talking to understand stories: Collaboration in a primary classroom. *Reflections on Canadian Literacy, 10*, 80–83.

Investigates whether working cooperatively in small discussion groups enhances children's interpretations of literature more than teacher intervention activities. Fifteen first graders who were able to read simple, unfamiliar print independently and to write independently, were divided randomly into two groups. During Trial 1, all children were read a story. Half discussed the lesson of the story in groups and half received questions from the teacher. Subsequently, all discussed what the story meant and retold the story orally before writing down the story's lesson and drawing accompanying pictures. In Trial 2, the groups were reversed. Trials 3 and 4 were similar, but sequence of delivery was reversed and directions were more structured so that each group member shared the lesson of the story. Responses were evaluated holistically by teachers in discussion with one another. Scores were collected and collapsed into two conditions: cooperative and teacher-led. Subjects obtained higher scores under the cooperative condition than under the teacher-led condition. Lower quality answers were given more frequently in the teacher-led group than in the cooperative group. Groups worked better when they had an established framework to follow for discussion than when they created procedures for themselves.

SMAGORINSKY, PETER, & SMITH, MICHAEL W. (1992, Fall). The nature of knowledge in composition and literary understanding: The question of specificity. *Review of Educational Research, 62*, 279–305.

Reviews issues of knowledge transfer as they are discussed in the literature of educational psychology and makes distinctions among three currently debated positions on how composition and literary understanding should be taught: the position of general knowledge, the position of specific knowledge, and the position of community-specific knowledge. The implications for instruction, learning, and transfer based on each position are discussed.

VIRTANEN, TUIJA. (1992). Issues of text typology: Narrative—a "basic" type of text? *Text, 12*, 293–310.

Discusses issues and research related to text typologies. The author discusses how text types that can be characterized on the basis of text-internal criteria may be found in a number of different externally defined text types. A two-level text typology is suggested for typological analysis of authentic texts. Using text production as an example, the discourse type chosen will be based on the purpose of the discourse; the discourse type will also affect the entire strategy of the text. The author argues that typifying text on the basis of prototype theory is a useful way of studying discourse and text as it yields better understandings of text production and text-comprehension processes. The author suggests that the narrative form has potential for accommodating any discourse type and may thus be considered as having potential as a basic text type.

DURGUNOGLU, AYDIN Y., & JEHNG, JIHN-CHANG J. (1991). Elaborate inferences on an expository text. *Contemporary Educational Psychology, 16*, 314–330.

Examines differences between remembering text information and inferencing from it. Variables that differentially affect elaborative inferencing and memory processes are also determined. Participants in the study were 110 university undergraduate students. After being assessed on the extent of their background knowledge of ancient civilizations, subjects read an expository text on the Phoenicians in one of three formats: (1) structured, in which the text was hierarchically organized under headings; (2) unstructured, in which the passages were reordered and headings removed, and (3) mixed, in which the text was structured during the first presentation and not structured in the second. After the reading, subjects were given text statements and asked for recognition or inferencing judgments. Items requiring inferencing were categorized on dimensions of richness or distance. The richness dimension reflected the number of information sources in the text that could be used to make an inference. If the inference involved putting together explicit information within the text to verify a statement, it was categorized as near in distance. If the item required application of studied information in another situation to make a prediction, it was categorized as far in distance. Separate statistical analyses performed on the data from each task showed that text organization tends to affect performance on recognition but not verification items.

Richness of available information and type of processing required to make an inference did affect performance on verification of nonstudied items by inferencing.

IV-10 Oral reading

Mullikin, Colleen N.; Henk, William H.; & Fortner, Betty Holmes. (1992, October–December). Effects of story versus play genres on the comprehension of high, average, and low-achieving junior high readers. *Reading Psychology, 13*, 273–290.

Investigates the effects of type of narrative text (story versus play) and mode of reading (group oral versus silent) on reading comprehension performance of high-, average-, and low-ability junior high school pupils. Subjects, 138 seventh graders from one school, were initially classified by the CTBS as to reading level; levels were verified by teacher judgment. Equivalent story versions were created for each of four plays; ten open-ended comprehension questions were developed for each of the eight texts. Each subject encountered all four storylines, two in story format and two in play format. One of each text pair was read silently while the other was read aloud in the group setting. A 3 x 2 x 2 repeated measures analysis of variance found significant main effects for reading ability, text type, and reading mode. Low- and average-ability readers benefitted more from reading plays than from reading stories. Low-ability readers scored nearly as well as the high-ability readers in oral reading in the group setting. Greater discrepancies between groups occurred on narratives that were read silently.

IV-11 Rate of reading

Rubin, Gary S., & Turano, Kathleen. (1992, May). Reading without saccadic eye movements. *Vision Research, 32*, 895–902.

Determines, in three experiments, the limiting effects of saccadic eye movements on reading speed. Subjects, 13 normally sighted adults ranging in age from 20 to 85 years, read text under two conditions: PAGE, in which an entire passage was presented in conventional static paragraph format, and RSVP (rapid serial visual presentation), in which the text was shown sequentially, one word at a time, at a fixed point in the visual field. In Experiment 1, PAGE and RSVP texts printed in a variety of letter sizes were read aloud by the subjects. Repeated measures ANOVA revealed reading speed of RSVP presentations exceeded that of PAGE presentations at all letter sizes tested. In Experiment 2, PAGE and RSVP texts were read silently and comprehension of the information in each passage was assessed on separate multiple-choice tests. Results of repeated measures ANOVA showed RSVP presentations continuing to result in significantly higher reading speeds than PAGE presentations while maintaining 75% comprehension. Experiment 3 assessed minimum word-exposure time required for decoding text. RSVP was used to minimize delays that might arise from saccadic eye movement control. Findings demonstrated that information required for decoding and comprehension can be attained in less than 70 msec.

Lloyd, Jennifer, & McKelvie, Stuart J. (1992, July). Effects of spatial disruptions on reading speed for fast and slow readers. *Journal of General Psychology, 119*, 229–235.

Investigates the effects of spatial disruptions on the reading speed of fast and slow adult readers. The subjects were 45 undergraduate volunteers who were tested individually.

The stimuli consisted of three paragraphs (A, B, and C) that were similar in length (228, 335, and 343, respectively) and were described as representing an adult comprehension level. Paragraph A was presented normally; paragraphs B and C were shown either with spaces that had been filled in or with spaces that were random in size. Initially, subjects were divided into extreme groups of faster and slower readers on the basis of their performance on paragraph A. This yielded a total of 10 faster and 10 slower readers. A 2 x 3 (subject speed x condition) mixed-model ANOVA was conducted on the data and revealed that all three effects were significant. Performance was better in the normal condition than in the random condition, which was in turn higher than performance in the filled condition. To examine the significant interaction, individual *t* tests between the faster and the slower readers were conducted. For faster readers, who were faster under all conditions, performance was best with normal text, followed by random, then by filled. However, for the slower readers, performance was similar in the normal and random conditions and was better in both these than in the filled condition. A comparison of the differences between the normal condition and each of the disrupted-spacing conditions for faster and slower readers revealed that the reduction in reading speed with disruption was higher for the faster subjects.

KINCADE, KAY M., & GREENE, BARBARA A. (1992, Fall). College students' comprehension and impressions of computer-presented text: The effects of text segmentation size and reading speed. *Journal of College Reading and Learning, 25*, 18–28.

Examines one widely used computer-based reading instruction program for college developmental reading to determine the effects that reading speed (200 WPM, 350 WPM, or 500 WPM) and text-segmentation size have on students' comprehension performance. Also investigated were students' metacognitive impressions of which features of the program facilitated their reading and which interfered. Sixty undergraduate and 12 graduate students read the same passages on the screen, answered the multiple-choice questions at the end of each passage, and, at the end of all presented passages, answered three questions concerning their comfort with the assigned reading speed, the segment length they found to be more difficult for reading with comprehension, and their explanation of why they found that length problematic. As speed of presentation increased, proportion correct decreased. Length of text segment presented was not important when participants were reading at 200 WPM. Text presentation in shorter segments was more important when reading at either 350 WPM or 500 WPM. Students found understanding the text more difficult in the shorter segment form than in the longer. Only at 500 WPM was the shorter segment easier. Reasons for difficulties with the short segment included interference with constructing meaning, interference with concentration, differences from normal reading, and the interaction of segment size with the speed of presentation.

BOWERS, PATRICIA GREIG. (1993, June). Text reading and rereading: Determinants of fluency beyond word recognition. *Journal of Reading Behavior, 25*, 133–153.

Explores the hypothesis that digit-naming speed predicts both initial speed and accuracy of text reading and gains in both speed and accuracy after practice. Subjects were poor and average readers selected in grade 2 and followed through grade 4. Of the original sample, 37 were available for follow-up study. Subjects completed tests of symbol-naming speed, phonological-deletion tasks, the WRMT word-identification subtest, the vocabulary subtest of the WISC-R, and repeated readings at the level of difficulty appropriate for each child. Comprehension questions were asked after specific text readings. Phoneme deletions and digit-naming speed were consistently related to speed and errors, both on initial readings and on reading for the fourth time. When word-recognition skill was controlled, digit-naming speed contributed significant additional variance to reading speed, both before and after practice. Results suggest that digit-naming speed is related to speed of text reading after variables representing individual differences in word recognition and phonological skill are controlled.

IV-12 Other factors related to reading

CIPIELEWSKI, JIM, & STANOVICH, KEITH E. (1992, August). Predicting growth in reading ability from children's exposure to print. *Journal of Experimental Child Psychology, 54*, 74–89.

Reports a longitudinal study of growth in reading ability employing two indicators of print exposure that use a checklist-with-foils logic and that have brief administration times. Subjects were 52 boys and 46 girls recruited from a religiously affiliated private school. They were distributed in four different classrooms across two grades (54 in Grade 4 and 44 in Grade 5). Print exposure measures included a Title Recognition Test (TRT) of 38 items and an Author Recognition Test (ART) of 40 names. These tasks were lists that included both authentic and foil items, and subjects were directed to identify the ones they actually recognized. Reading ability measures included reading subtests of the ITBS and SDRT available from school records. Data were analyzed by determining coefficients between the measures of print exposure and reading ability and by regression analysis. Results indicated that both print exposure measures displayed significant correlation coefficients with every measure of reading comprehension ability, although the coefficients for the ART with measures of reading comprehension tended to be lower than those involving the TRT. Results of the regression analysis indicated that in the case of the fifth-grade Stanford reading comprehension scores, both TRT and ART accounted for significant variance after third-grade reading comprehension was partialed. The TRT was also a significant unique predictor of fifth-grade Iowa reading comprehension scores, but the ART was not. Additionally, both measures of print exposure accounted for significant variance after third-grade reading comprehension was partialed. Individual differences in third- to fifth-grade growth in reading were significantly related to the two indicators of print exposure.

WATKINS, MARLEY W., & EDWARDS, VICKI A. (1992, Winter). Extracurricular reading and reading achievement: The rich stay rich and the poor don't read. *Reading Improvement, 29*, 236–242.

Tracks amount of extracurricular reading for one year's time done by 463 pupils enrolled in Grades 3–6 to determine if good readers read more and if frequency of reading improves reading proficiency. Parents entered the number of extracurricular minutes read each day onto a reading calendar; total reading time was calculated for each student from the calendars. Reading proficiency was determined by ITBS reading scores. Girls read more than boys, and fifth graders read more than third graders. No significant gender differences were found for test scores. Children were divided into three groups on preexisting reading proficiency and on engagement with reading as determined by minutes read per day (low, medium, and high engagement). A 3 x 3 ANOVA revealed significant main effects for preexisting reading levels and for extracurricular reading. Extracurricular reading accounted for approximately 1% of the variance in current reading achievement independent of preexisting reading proficiency while preexisting reading proficiency accounted for 50% of the variance. Teachers had a significant influence on pupils' involvement in reading, with classes showing great variety in the amount of time spent in extracurricular reading.

Jackson, Nancy Ewald; Donaldson, Gary W.; & Mills, Joseph R. (1993, June). Components of reading skill in postkindergarten precocious readers and level-matched second graders. *Journal of Reading Behavior, 25*, 181–208.

Compares the cognitive, word-reading, and oral and silent text-reading skills of 116 postkindergarten precocious readers with 123 above-average second grade readers matched on reading comprehension level to determine (1) the profile that best characterized the precocious group as a whole and (2) where the precocious readers differed from one another in strengths and weaknesses. Reading histories were collected on both groups, and all were administered a series of 11 tasks. The cognitive, word-reading, and text-reading skills of both groups could be described by the same set of factors. Structured means analyses indicated that the two groups differed significantly on letter-naming speed, on all three word-reading factors, and on every text-reading factor except oral text-reading accuracy. Covariances between orthographic and phonological word identification and between oral text-reading accuracy and effectiveness were lower for precocious than for second-grade readers.

Meyer, Linda A.; Wardrop, James L.; Hastings, C. Nicholas; & Linn, Robert L. (1993, January/February). Effects of ability and settings on kindergartners' reading performance. *The Journal of Educational Research, 86*, 142–160.

Explores the effects of entering decoding ability and setting on pupils' reading performance at the end of kindergarten. Subjects were kindergarten pupils ($\underline{N} = 650$) and teachers from three school districts. Districts A and B were located in small towns; District C was located in a suburb of a major city. Two cohorts of children, beginning kindergarten one year apart, were followed in each district. Two districts had a half-day program; the third had a full-day program. Data collection included testing at the beginning and end of the kindergarten year and 9 full days of observation in the classrooms. Descriptive findings and results from multiple regression analyses revealed strong relations between the pupils' WRAT scores upon entering kindergarten and their spring scores on three measures of reading performance: the WRAT, the Woodcock Reading Comprehension paragraphs, and the Chicago Reading Test. There were also substantial and significant differences among districts on the end-of-year measures. No differences were identified for time of day (morning vs. afternoon class) or for the interaction of teacher and time of day. Among the process variables studied, confirming feedback was most frequently significant at the teacher level. The single best predictor of reading performance at the end of kindergarten was children's knowledge of letters and words at the beginning of the year. Findings indicated that what occurred in the classrooms, rather than the length of the school day, affected reading ability at the end of kindergarten.

Glaser, Wilhelm R. (1992, March). Picture naming. *Cognition, 42*, 61–105.

Reviews recent studies testing hypotheses about cognitive processes involved in picture naming. Focus is placed on experiments employing techniques of double stimulation such as the matching, priming, and Stroop interference paradigms. Five classes of hypotheses are discussed, including those pertaining to (1) internal systems with only pictorial components, (2) internal systems with only verbal components, (3) internal dual systems with both pictorial and verbal components, (4) internal abstract systems with logogen and pictogen components, and (5) lexical systems with abstract semantic memory components that involve themselves with picture processing and lexicon components that allow processing of all linguistic knowledge and abilities about semantics.

IV-13 Factors related to reading disability

Fletcher, Jack M. (1992, November). The validity of distinguishing children with language and learning disabilities according to discrepancies with IQ: Introduction to the special series. *Journal of Learning Disabilities*, *25*, 546–548.

Introduces a series of articles in two issues of the *Journal of Learning Disabilities* which question the validity of using discrepancies between academic attainment and intelligence test scores for distinguishing children with language and learning disabilities. Each study in the series is overviewed. Data from earlier studies and school practices are included. Implications for research and for public policy are stated.

Fletcher, Jack M.; Francis, David J.; Rourke, Bryon P.; Shaywitz, Sally E.; & Shaywitz, Bennett A. (1992, November). The validity of discrepancy-based definitions of reading disabilities. *Journal of Learning Disabilities*, *25*, 555–561, 573.

Questions the validity of the common practice of distinguishing children with reading disabilities according to the presence or absence of discrepancies between intelligence test scores and academic achievement scores. Using three definitions of reading disability, five groups of children were formed: those who met a discrepancy-based definition uncorrected for the correlation of IQ and achievement; those who met a discrepancy-based definition corrected for the correlation of IQ and achievement; those who met a low achievement definition with no IQ discrepancy; those who met both criteria; and those who met none of the criteria and had no reading disability. Those in all five groups were compared on a set of 10 neuropsychological tests corrected for correlations with IQ. Findings suggest limited evidence for discriminative validity of the various definitions and question the validity of segregating children with reading deficiencies according to discrepancies with IQ scores.

Pennington, Bruce F.; Gilger, Jeffrey W.; Olson, Richard K.; & DeFries, John C. (1992, November). The external validity of age- versus IQ-discrepancy definitions of reading disability: Lessons from a twin study. *Journal of Learning Disabilities*, *25*, 562–573.

Studies genetic etiology, sex ratio, clinical correlates, and neuropsychological profiles of 640 RD and 436 control twins to determine the external validity of age- versus IQ-discrepancy definitions of reading disability. Measures studied included attention deficit-hyperactivity disorder, atopic disorders, handedness, intelligence, academic achievement, spatial reasoning, perceptual speed, verbal short-term memory, and phonological and orthographic coding. Study of the clinical correlations of attention deficit-hyperactivity disorder, immune disorders, handedness, or differential genetic etiology, give little evidence for the external validity of the definitions. Analyses of the genetic and neuropsychological profiles suggest that age- and IQ-discrepancy definitions may relate differentially to processes such as phonological awareness and orthographic coding.

Dykman, Roscoe A., & Ackerman, Peggy T. (1992, November). Diagnosing dyslexia: IQ regression plus cut-points. *Journal of Learning Disabilities*, *25*, 574–576.

Argues for a two-step procedure in diagnosing dyslexia in students rather than the use of regression formulas alone. Subjects were 178 students with ADD who were screened with the WRAT-R and the WISC-R. Using a definition of dyslexic as falling 1.65 SEs below predicted reading score, 103 readers were identified as dyslexic. However, about 30 of those with high IQs seemed misclassified. Using a second diagnostic procedure of determining that the student has a reading standard score below a specific level facilitated separating students who were dyslexic from those who were generally poor readers. To verify the impact of the two classification systems, external validation measures were administered to other samples of children. Using cut scores seemed to be the better choice for identification when spelling standard scores, errors in phonological sensitivity, and arithmetic standard scores were included. The two-step procedure appears to be a useful procedure for identifying and differentiating children with dyslexia from those who are low achievers in reading.

FERGUSSON, D.M., & HORWOOD, L.J. (1992, February). Attention deficit and reading achievement. *Journal of Child Psychology and Psychiatry, 33*, 375–385.

Proposes a structural equation model for estimating possible reciprocal relations between attention deficit and reading achievement and applies the model to data from a cohort of New Zealand children. A subsample of 777 children from a birth cohort of 1,265 children were assessed at ages 10 and 12 on measures of attention and reading achievement. Two measures of reading achievement were administered: the New Zealand revision of the Burt Word Reading Test and a research version of the Progressive Achievement Test (reading comprehension). Measures of attention deficit were based on teacher reports and maternal reports at age 10; at age 12, parents and teachers completed the same questionnaire as at age 10, and an 11-item self-report inventory was completed by each child. Findings from the model suggested that at age 12 there is evidence to indicate that the child's level of attention deficit influences reading ability but there is no evidence to indicate that reading ability influences attention deficit. It is noted that there may not be a single answer to the question about the relation between reading achievement and attention deficit, but that the relation may vary dynamically with time.

LAMM, OREN, & EPSTEIN, RACHEL. (1992, November). Specific reading impairments—Are they to be associated with emotional difficulties? *Journal of Learning Disabilities, 25*, 605–615.

Tests and compares four groups to determine whether learning disabilities are significantly correlated with emotional difficulties and, if they are, whether or not a unique emotional profile identifies individuals with dyslexia. Subjects, all Israelis aged 15 to 23 years, included 38 with developmental dyslexia, 28 with subjective complaints regarding general concentration and reading comprehension problems, 23 psychiatric patients, and a control group of 44 skilled readers without any known emotional difficulties. Subjects were administered the WISC-R or WAIS and the Hopkins Symptom Checklist (HSCL-90), a 90-item questionnaire used to differentiate among psychiatric patients, subjects with neurotic symptoms, and controls. In addition, subjects were individually tested with reading and writing tests to obtain (1) average vocal reading speed (VRS)—words per minute, (2) average proportion of vocal reading errors out of words read (VRE), (3) average recall of details (DR), and (4) rate of spelling errors considered homophone confusions (HC). Dyslexics were found to be significantly inferior to other groups in VRS, VRE, and HC; their scores on DR were lower than controls but significantly better than subjects with concentration difficulties. A cluster analysis of subjects' HSCL-90 profiles showed no significant differences between dyslexics and controls, but both groups were differentiated from psychiatric patients. Subjects with severe deficits in the ability to recall details and with subjective complaints concerning concentration difficulties tended to have emotional profiles testifying to a high level of anxiety. This latter group and dyslexics differed with regard to the failure factors underlying their phenotypic difficulties.

WOLF, MARYANNE, & OBREGÓN, MATEO. (1992, April). Early naming deficits, developmental dyslexia, and a specific deficit hypothesis. *Brain and Language, 42*, 219–247.

Reports on the last two years of a longitudinal study of confrontation picture naming (word retrieval) and reading development in average and dyslexic children between the ages of 5 and 10. Specifically, the study sought to determine whether: (a) word retrieval problems noted in earlier years persist for most dyslexic children in Grades 3 and 4, (b) the word retrieval errors of dyslexic children stem from vocabulary knowledge deficiencies, (c) a relation exists between word retrieval performance and specific skills such as silent reading comprehension, oral reading, and word recognition in normal and dyslexic children, and (d) word retrieval problems are specific to dyslexics. Subjects were 42 average readers, 8 dyslexics, and 24 poor readers in Grades 3 and 4. Word retrieval for all subjects was assessed on the Boston Naming Test, and reading on the GMRT, the GORT and word recognition measures probing children's abilities to read words that were nonsensical, phonologically regular, and phonologically irregular. Analyses revealed that word retrieval deficits noted in dyslexics during their primary school years endured into middle childhood. Deficiencies in word retrieval were not attributed to vocabulary knowledge deficiencies. A pattern of differential relations between specific reading disabilities and word retrieval was noted. This pattern seemed to be based on developmental factors as well as levels of processing involved. Results also suggested that the more pronounced the word retrieval deficit, the more pervasive the reading difficulty and that word retrieval problems of dyslexics have different bases than those of other problem readers.

WIMMER, HEINZ. (1993, March). Characteristics of developmental dyslexia in a regular writing system. *Applied Psycholinguistics, 14*, 1–33.

Assesses reading difficulties and cognitive impairments of German-speaking dyslexic children in Grades 2, 3, and 4. Children in the study were identified by teachers from 20 classrooms as having specific reading or spelling difficulties. From these children, the sample was selected based on performance on text (story), content words, and function words subtests of a reading task battery. The dyslexic children's reading of pseudowords and their performance on cognitive tasks (pseudoword spelling and detection, vowel substitution, rhyme oddity detection, digit span, rapid naming, and visual processing) was compared to the performance of age-matched control children. All tasks were administered individually. Findings suggested that German dyslexic children suffered from a pervasive speed deficit for all types of reading tasks but showed generally high reading accuracy. Reading speed seemed to be the most impaired for pseudowords and function words that did not allow children to take a short-cut from the phonemically mediated word processing. Discussion offers a developmental framework for the interpretation of these reading difficulties.

WINNE, PHILIP H.; GRAHAM, LORRAINE; & PROCK, LEONE. (1993, January/February/March). A model of poor readers' text-based inferencing: Effects of explanatory feedback. *Reading Research Quarterly, 28*, 52–66.

Contrasts instruction that varied two forms of feedback about text-based inferences to investigate whether explanatory feedback is essential to boost pupils' ability to draw text-based inferences and to generalize this to other passages. Subjects were 24 low-achieving readers enrolled by parents or guardians in a nine-session summer tutoring program. All pupils had been identified as LD by their schools, and each had recently completed the third, fourth, or fifth grade in a regular classroom with supplemental instruction for reading. Subjects were randomly assigned to one of two treatment conditions: 11 in the explicit feedback treatment and 13 in the inductive feedback treatment. University tutors, using protocols that standardized major elements of instruction, read passages that included five types of information: problem statement, rule related to the problem, critical fact fitting the rule that solved the problem, spurious information that apparently would solve the problem, and facts. In instruction, an inference question was asked followed by one question about each type of information. In the inductive condition, tutors provided specific feedback about pupils' answers to all questions; pupils had to induce processes. In the explicit condition, tutors added to feedback by explaining and demonstrating the process for combining information about the problem, rule, and critical fact to create an inference. Three passages and accompanying questions were used for a pretest and three others for a posttest. Pupils answered comprehension questions better at posttest than pretest as a result of instruction. A priori contrasts were used to examine treatment effects on posttest scores. Analysis revealed that pupils who received explicit feedback outperformed students who received inductive feedback on text-based inference questions.

KERSHNER, JOHN R., & STRINGER, RONALD W. (1991, November). Effects of reading and writing on cerebral laterality in good readers and children with dyslexia. *Journal of Learning Disabilities, 24*, 560–567.

Examines the effects of reading and writing on cerebral laterality in good and poor readers. Also examines the relation between children's language lateralization and performance on various academic measures. Subjects were 36 right-handed males from a middle-class area in Canada. Twelve subjects were phonologically dyslexic 8- to 12-year-olds, 12 were age-matched good readers, and 12 were younger reading-matched good readers. All subjects were of at least average intellectual ability. A variety of measures were administered to determine subject patterns of laterality as well as their abilities in pseudo-word decoding, word recognition, spelling, arithmetic, and writing. Statistical analyses revealed dyslexia to be unrelated to incomplete lateralization or to inability to inhibit verbal processing in the right cerebral hemisphere during reading and writing. Dyslexics showed increases in lateralization when reading and decreases when writing. Increases in lateralization were negatively correlated to performance in arithmetic, while decreases were linked to deficits in phonological decoding and visual word recognition. Results are interpreted as suggesting that dyslexic children suffer from a selective linguistic vulnerability to left hemisphere interference from idiosyncratic attentional and processing demands of various school tasks.

HANLEY, J. RICHARD; HASTIE, KIM; & KAY, JANICE. (1992, February). Developmental surface dyslexia and dysgraphia: An orthographic processing impairment. *The Quarterly Journal of Experimental Psychology, 44A*, 285–319.

Presents the investigation of one young man who had suffered from a severe spelling impairment since childhood. The subject was 22 years old; his problems were first noted by his parents when he was 6 years old. He was administered a range of tests to determine his cognitive, reading, phonological, and spelling abilities. On the WAIS, he obtained a Verbal IQ score of 122 and a Performance IQ score of 131. He performed at ceiling on the Schonell Reading Test, equivalent to a reading age of 12+ years. His performance on several phonological tests that did not involve reading was good. Tasks involved repeating a mixed list of 80 spoken words and 80 spoken non-words of between one and four syllables, making auditory rhyme judgments, counting phonemes in spoken words and nonwords, and a Spoonerism task. He had a spelling age of 9.2 years on the Schonell Spelling Test. In total, he was given 674 words to spell and was correct on only 361 occasions (54%). He could read and spell nonwords competently, and, unlike normal 9-year-old children, all of his spelling errors were phonologically appropriate. Although his oral reading of words was prompt and generally accurate, analysis of his lexical decision performance and the way that he defined homophones indicated that he did not have fully specified lexical entries available for reading. The authors suggested that he suffered from a general orthographic processing deficit, and relied instead upon the combination of sublexical phonology and a lexicon that contained only partial information about the way in which words are spelled.

Wolf, Maryanne, & Segal, Denise. (1992, November). Word finding and reading in the developmental dyslexias. *Topics in Language Disorders, 13*, 51–65.

Reviews research on the co-occurrence of word finding and reading difficulties in developmental dyslexias and summarizes a four-phase research program on the relation between reading and naming ability. Phase 1 involved construction of a componential model of word retrieval for use in the selection of measures that could systematically probe problematic areas in the development of word retrieval and reading abilities. Phase 2 entailed a cross-sectional study of 32 average readers and 32 dyslexics, aged 6 to 11, that revealed the existence of a strong relation between word retrieval and reading skills. ANOVAs performed during this phase revealed the limitations of receptive vocabulary measures and the powerfulness of naming speed measures as group differentiators. Phases 3 and 4 encompassed a series of studies conducted with subject samples ranging from kindergarten age to adulthood. Results of these studies established (1) the word retrieval system as a strong, early, and differential predictor of various aspects of reading; (2) naming speed and accuracy as the most powerful differentiator between average and dyslexic readers over the age spans tested; (3) specific naming speed deficiencies that differentiate dyslexics from poor readers and age mate controls; and (4) certain aspects of word retrieval that are amenable to intervention.

McBride-Chang, Catherine; Manis, Franklin R.; Seidenburg, Mark S.; Custodio, Rebecca G.; & Doi, Lisa M. (1993, June). Print exposure as a predictor of word reading and reading comprehension in disabled and nondisabled readers. *Journal of Educational Psychology, 85*(2), 230–238.

Determines the influence of print exposure on word reading and reading comprehension in disabled and non disabled readers. The reading-disabled group ($\underline{n} = 36$) included students in fifth through ninth grade who scored at the 25th percentile and below on the word identification subtest of the WRMT. The majority of subjects came from a school for students with learning disabilities and qualified for LD classes. The nondisabled group ($\underline{n} = 49$) was comprised of fifth through eighth graders from four public schools who scored above the 25th percentile on the test. Subjects were tested in three sessions during school. Tests included the comprehension and vocabulary subtests of the SAT, Test of Nonverbal Intelligence, memory for words subtest from the Woodcock Johnson Test of Cognitive Ability-Revised, metacognitive questionnaire, the Title Recognition Test (TRT) (to measure exposure to print), nonword naming, and orthographic choice. In disabled readers, the TRT was a significant predictor of word reading when phonological skill was accounted for but not when orthographic ability was added to the regression equation. The TRT significantly predicted nondisabled readers' word reading after both phonological and orthographic skills were accounted for. In addition, TRT contributed significantly to reading comprehension once variance was partialed from higher order reading processes for disabled readers only. The TRT ability to predict comprehension may be influenced by the effects of print exposure on automaticity of word recognition, knowledge, or text schema.

Gilger, Jeffrey W.; Pennington, Bruce F.; Green, Phyllis; Smith, Sandra M.; & Smith, Shelley D. (1992, March). Reading disability, immune disorders and non-right-handedness: Twin and family studies of their relations. *Neuropsychologia, 30*, 209–227.

Investigates whether or not reading disabilities (RDs) are associated with either disorders related to the immune system (ID) or non-right-handedness (NRH). Four previously conducted independent studies provided data on handedness, immune disorders, and reading disabilities in families and twin samples (total $\underline{N} = 1731$ cases) identified through an RD proband. Differences in population characteristics, diagnostic criteria, and ascertainment methods among the four studies are specified. Several different classes of analyses provided little support for an overall association between RD and the other conditions. Analyses used to determine the degree to which NRH, ID, and RD are biologically related also revealed little evidence that RD and NRH or RD and ID cosegregate in families.

LIBERMAN, ISABELLE Y.; SHANKWEILER, DONALD; & LIBERMAN, ALVIN M. (1989). The alphabetic principle and learning to read. In Donald Shankweiler & Isabelle Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 1–33). Ann Arbor, MI: University of Michigan Press.

Sets forth the research evidence supporting the view that learning to read involves an awareness of the internal phonological structure of the words of the language and that beginning learners with a weakness in phonological awareness are at risk. Such children are also poor in short-term memory for verbal information, in perceiving speech in noise, in producing complex speech patterns, and in finding the words that name objects. It is felt that instruction designed to demonstrate and build phonological awareness will benefit these children.

SHANKWEILER, DONALD. (1989). How problems of comprehension are related to difficulties in decoding. In Donald Shankweiler & Isabelle Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 35–68). Ann Arbor, MI: University of Michigan Press.

Reinterprets previous evidence and reviews new data in developing the argument that a phonological processing deficit can explain all difficulties experienced by poor readers. It is proposed that difficulties at the word level and at the sentence level have a common source, a deficit in phonological processing.

CRAIN, STEPHEN (1989). Why poor readers misunderstand spoken sentences. In Donald Shankweiler & Isabelle Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 133–165). Ann Arbor, MI: University of Michigan Press.

Uses the research literature to advance hypotheses about the causes of impaired performance in spoken sentence comprehension in children with reading difficulties. A study is very briefly described in which 44 good and 46 poor readers in second grade were presented with sentence comprehension tasks in which nonsyntactic demands on comprehension were controlled. Children diagnosed as cases of specific reading disability were found to succeed under these conditions. Findings are interpreted as support for the view that spoken language comprehension failures by poor readers are a function of limitations on phonological processing involving working memory.

WILLIAMS, MARY C.; LECLUYSE, KATIE; & ROCK-FAUCHEUX, ANITA. (1992, June). Effective interventions for reading disability. *Journal of the American Optometric Association, 63*, 411–417.

Notes the effects of an intervention consisting of colored overlays on the comprehension abilities of reading disabled children. Subjects were 38 RD and 32 normal children, aged 8 and 12 years, matched for age and IQ. Average reading lag for RD children was 2.2 years based on a standardized reading test. In the first of several experiments, reading comprehension was assessed under three presentation conditions in which passages were presented on a computer monitor (1) one word at a time, (2) one line at a time with the words appearing from left to right in a moving window fashion, and (3) one line at a time. Grade level of the passage and presentation rate were determined by each subject's performance on a standardized reading test. Text was presented as unfiltered white letters on a black background or with computer monitors covered with a red, blue, or acetate (for image blurring) overlay.

Multiple-choice questions followed every two paragraphs of text. Subjects read one story in each presentation-color condition, with order of presentation and text color condition counterbalanced across subjects. When passages were presented with clear images, the three presentation conditions did not have differential effects on the reading comprehension of normal readers, but RD children performed more poorly in the third condition than in the other two conditions. With the blurred image, comprehension of controls decreased in Condition 3 while performance of RD children improved. When red text was used, RD children showed a smaller decrement in performance in Condition 1 than did normal readers; with the blue overlay, the effect on comprehension was similar to that produced by the blur manipulation. A second experiment used standardized reading passages on monitors with black text on blue, green, and red backgrounds. White, light gray, and dark gray backgrounds were used to provide a measure of the effect of reducing contrast independent of color and with no sacrifice of image clarity. Passages were presented one page at a time and subjects controlled the rate of presentation. Multiple-choice questions followed each passage. Children read one story in each color condition. Blue and light gray backgrounds produced significant improvement in the comprehension of the RD group compared to the white background, while the red background produced a significant decrease in comprehension; 75% of RD children showed this pattern. Controls showed a significant improvement with the blue background only and a significant decrease with the red background. Reading comprehension and rate were then assessed using blue, red, and gray plastic overlays in graded books; similar results were obtained.

FLEENER, FRAN T., & SCHOLL, JAN F. (1992, June). Academic characteristics of self-identified illiterates. *Perceptual and Motor Skills, 74*, 739–744.

Obtains a profile of the reading skill needs of 35 adults who identified themselves as needing improvement in reading. Subjects were 22 men and 13 women over the age of 16 who perceived themselves as needing improvement in their reading skills. Each subject was tested on the WRMT. Test results showed that, although all subjects had completed at least 6 years of school, 16 were functionally illiterate, that is, reading below the fifth grade level. Although 17 of the subjects were at least high school graduates, only two were reading at the 12th grade level. A variety of reading problems were exhibited by the subjects, with the most common being in the areas of phonics, perception, and comprehension.

IV-14 Sociocultural factors and reading

SNOW, CATHERINE E.; BARNES, WENDY S.; CHANDLER, JEAN; GOODMAN, IRENE F.; & HEMPHILL, LOWRY. (1991). *Unfulfilled expectations: Home and school influences on literacy.* Cambridge, MA: Harvard University Press.

Studies the ways in which both home and school experiences affect the literacy development of children from low-income families. The study contrasted low-income families that had produced successful school learners with those that had produced below-average learners. Included were three cohorts of children at Grades 2, 4, and 6 who were followed for 2 years. Children were selected who ranged from somewhat below to somewhat above average in reading; an attempt was made to select better and poorer readers from the same classrooms. Literacy skills were assessed by means of the WISC-R vocabulary subtest, the Diagnostic Assessment of Reading and Teaching Strategies for word recognition and comprehension, and word production in narrative and expository writing samples as a measure of writing. Each child was tested twice at 1-year intervals. In addition, the research attempted to obtain a comprehensive view of children's activities both at home and at school and to relate these to each other. Three major types of data collection were combined: interview (including questionnaire), observation, and tests. Teachers, parents, and siblings of the focal children were used as sources of data. Different domains of the child's and family's life were probed to obtain information about literacy skills, school experiences, literacy practices, free time activities, the family's social network and use of rules and schedules, the family's perceptions of each other, and the emotional tone of family interactions. Many different aspects of school practice had an effect on the literacy achievement of the subjects involved, but classrooms using a wide variety of materials and activities in literacy instruction produced the most gains in vocabulary and reading comprehension. Correlation coefficients ranging between .18 and .32 were found between reading comprehension scores and literacy development in the home, TV rules, mother's educational expectations, outings with adults, per capita income, and parent-school involvement. The strongest family environments for fostering literacy held features in common with the best school environments: availability of books and other reading materials, conversations between children and adults about the content of items read, a predictable and secure atmosphere, and high standards for children's achievement combined with emotional support.

Weisner, Thomas S., & Garnier, Helen. (1992, Fall). Nonconventional family life-styles and school achievement: A 12-year longitudinal study. *American Educational Research Journal, 29*, 605–632.

Examines the effects of nonconventional family organization, parents' values and commitment to their family life-style, and family stability on children's school achievement. This was a 12-year, longitudinal study of 146 nonconventional families and a comparison group of 43 stable, two-parent conventional families. Subjects comprising the nonconventional family sample were drawn from a larger study, the Family Lifestyles Project. Data were gathered on parent demographic background and values beginning at the last trimester of pregnancy through 6 years. Data on family organization were obtained throughout the 12-year period using interviews and telephone conversations with parents and during three home visits between birth and age 6. School data (math and reading grades) were collected from classroom teachers three times from ages 7 to 12, in Grades 1, 2, and 6. Cognitive abilities were assessed using the WISC-R (at age 6), the Stanford-Binet (at age 3), and the Bayley (at age 1). To analyze mathematics and reading grades, ANCOVA on repeated measures was used. Covariates included SES, the WISC-R, and sex. Results revealed that most nonconventional children did as well or better in school than a comparison group of conventional families. These effects were still present after adjusting for IQ, sex, and family SES. Those children doing best in school came from families who had a stronger commitment to their nonconventional family life-style. Children in single parent families had grades similar to those of children in two-parent families. Family stability was also associated with higher grades.

Eldridge-Hunter, Deborah. (1992). Intergenerational literacy: Impact on the development of the storybook reading behaviors of Hispanic mothers. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 101–110). Chicago, IL: National Reading Conference.

Asks how storybook reading behaviors of four Hispanic mothers develop as a result of explicit instruction and experience. Subjects were selected because they were Hispanic, had one or more preschool children at home, and had no prior experience in reading to their children. The mothers audiotaped themselves at home sharing storybooks once every 4–6 weeks, resulting in data on 16 books for a total of 157:05 minutes. Audiotapes were transcribed, translated into English, and used to code the utterances as interactions, responses, questions, functions, and focus. Evidence suggested that the areas most likely to be affected by explicit instruction are maternal responsiveness to child initiations, the semantic contingency of maternal responses, and the focus of maternal utterances on literacy.

MYERS, JAMIE. (1992). The social contexts of school and personal literacy. *Reading Research Quarterly*, *27*, 297–333.

Explores the range of reading and writing activities that occur daily within eighth grade classrooms to determine how junior high students construct and participate in authentic and nonauthentic literacy events. The study took place in six language arts classes in a rural school. The researcher, acting as a participant observer, interacted with and interviewed approximately 140 students about their thinking processes and social relationships arising from various literacy events. Over the 4-month span of the study, the researcher recorded the focus and social context of various literacy events in the form of episodes. At selected intervals during the study, episodes were sorted into thematic categories, each descriptive of a type of thinking that occurs within a specific social context. Results are utilized to formulate a sociopsychosemiotic theory of literacy.

WEINSTEIN, THOMAS, & WALBERG, HERBERT J. (1993, February). Practical literacy of young adults: Educational antecedents and influences. *Journal of Research in Reading*, *16*, 3–19.

Analyzes data drawn from the 1985 NAEP survey to determine the influences of education, social environment, and current activities on the practical literacy of young adults in the United States. In total, 3,618 young adults, ages 21 to 25 years, were included in the NAEP survey. Oral and written examinations provided measures of comprehension of written language, documentary and writing skills, pictorial and chart understanding, and numeracy; oral and some additional writing skills were assessed with single-item rating scales. A multidimensional model of literacy distinguished 20 early background characteristics of education, home and family from 16 literacy-promoting current adult activities. Regression and canonical analyses showed that both early experience and current activities influenced young adult literacy. Matthew effects, however, showed that early environmental advantages yielded subsequent advantages that led to wide disparities in adult literacy skills.

KLINGELE, WILLIAM E., & WARRICK, BILLIE KAY. (1990, May/June). Influence of cost and demographic factors on reading achievement. *Journal of Educational Research*, *83*, 279–282.

Investigates the relation between eight noninstructional variables and the reading achievement of fourth graders in the U.S. state of Arkansas during the 1986–1987 school year. For 332 school districts, a Pearson product-moment correlation coefficient was used to analyze the relation between children's composite reading scores on the MAT-6 and the following variables: (a) relative wealth of district, (b) district size, (c) local district expenditure on pupils, (d) total district expenditure on pupils, (e) Minimum Foundation Program Aid to the district, (f) percentage of district staff holding master's degrees or above, (g) percentage of pupils eligible for free and reduced lunches, and percentage of minority children per district. Results show that the percentage of minority children per district and the percentage of pupils eligible for free and reduced lunches had a significant negative relation with MAT-6 scores, while the percentage of staff holding master's degrees or above and the relative wealth of the district had a significant positive relation with test scores. No other variables were significantly related to test scores.

IV-15 Reading interests

Allen, Linda; Cipielewski, Jim; & Stanovich, Keith E. (1992, December). Multiple indicators of children's reading habits and attitudes: Construct validity and cognitive correlates. *Journal of Educational Psychology, 84*, 489–503.

Assesses the validity of different methods of measuring print experience. Subjects were 65 fifth grade pupils distributed across four classrooms in one private school. Children completed activity diaries indicating how they spend their nonschool time for 15 days. From these diaries, estimates of the minutes per day spent in reading and other activities were derived. Print-exposure measures included two forms of a Title Recognition Test (TRT) consisting of both actual book titles (25 on each form) and foils (15 or 16), an Author Recognition Test (ART) of 25 actual authors and 15 foils, and a comics recognition test of 24 titles (comic books and comic strips) and 16 foils. Each measure took approximately 5 minutes to administer. Three print-disposition measures were used: an activity preference questionnaire, a literacy and media habits questionnaire, and the Elementary Reading Attitude Survey. Criterion tasks were two researcher-designed vocabulary checklists which included 27 words and 13 foils (pronounceable nonwords), the PPVT-R, and vocabulary subtests of the MAT and GMRT. Subjects were also administered the general information subtest of the PIAT, the general information subtest of the WISC-R, and the riddles subtest of the Kaufman Assessment Battery for Children. The estimate of book-reading time from the activity diary correlated with the measures of individual differences in exposure to print (TRT and ART). Both diary- and checklist-estimated book reading predicted a variety of verbal outcome measures, but estimates of television watching did not. Multiple regression and factor analyses confirmed the convergent and discriminant validity of a construct argued to be best conceived of as nonschool print exposure. In contrast, questionnaire methods of assessing reading habits and attitudes appeared to assess the extent of general positive attitudes toward reading rather than the degree of print exposure.

Smolkin, Laura B.; Yaden, David B., Jr.; Brown, Laurie; & Hofius, Betsy. (1992). The effects of genre, visual design choices, and discourse structure on preschoolers' responses to picture books during parent-child read-alouds. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 291–302). Chicago, IL: National Reading Conference.

Examines the effects of design choices, book genre, and parent-child discourse structures on preschoolers' responses to picture books during reading. Six preschoolers (three boys and three girls) aged 3.6 to 4.8 years were audiotaped over three consecutive 10-day periods. A multiple baseline design was used in which three sets of three books were read three times each by all six children. Parents were instructed to follow their regular habits of storybook reading. The materials used were picture books selected and coded for their design elements: at least one of seven major categories of design features (speech balloon, print in pattern, change in type color, and so on) was clearly discernible in each book. A ninth book was selected as a control because of its lack of salient print display. Genres were picture storybooks, alphabet books, and information books. Children's print-oriented responses were classified in consideration of the context of response to literacy event and interactions in dialogue. Findings suggest that text design may be associated with children's attention to print as they respond to picture books. Although genres, by their nature, appear to influence print-oriented responses, two other factors appear influential as well: predictability and interest. More important, particular genres appear to influence parent-child discourse. There were notable differences in parental focus depending on the genre.

POTTER, ELLEN F., & ROSSER, SUE V. (1992, September). Factors in life science textbooks that may deter girls' interest in science. *Journal of Research in Science Teaching, 29,* 669–686.

Examines five seventh grade life science textbooks to see if they included any factors that might deter girls' interest in science. Books were examined for sexism in language, types of images of females and the number depicting them in active versus inactive situations, curricular content, and hands-on activities that have been found useful for motivating girls. While direct sexist language was not found in any of the textbooks, other forms of sexism were found. More images were of males, males played more active roles in the texts, and there was little information about achievements of women scientists or topics specific to women's health. While some texts included activities that would be interesting and motivating to girls, the five books varied in this regard.

GRICE, MARY OLDHAM, & VAUGHN, COURTNEY. (1992, June). Third graders respond to literature for and about Afro-Americans. *Urban Review, 24,* 149–164.

Analyzes youngsters' responses to literature written primarily for and about African American children. Subjects were nine black and four white children from a third grade classroom in an elementary school located in a southern city. Twenty-four children's books pertaining to African heritage, community and friends, family, biography, and poetry were read to the subjects by their teacher. Children were interviewed to determine their ability to comprehend, find realistic, become involved in, evaluate, and enjoy the works. Although a slightly higher percentage of black youngsters responded favorably to the books, prior experience, developmental age, motivation and academic background influenced all children's appreciation of them. Teacher-assisted group discussion helped children overcome difficulties with some of the stories.

RASMUSSEN, JAY B. (1993, Spring/Summer). What will Hispanic children read? *Arizona Reading Journal, 21,* 61–62.

Analyzes the content of fiction and nonfiction children's books dealing with Hispanic peoples. Titles were located using the Library of Congress subject headings for Mexico and Latin America. An equal distribution of titles were selected for children in grades 1–2, 3–4, and 5–6. From the 42 located titles, 24 books, selected by using a stratified random sample, were analyzed for literary characteristics and by grade levels for topic and genre. Books for grades 1–2 most frequently dealt with children and people, animals, making objects, and fairy tales. For grades 3–4, the most common content factors were familiar experience, animals, adventure, mystery, and fantasy. For grades 5–6, common factors included adventure and children, recreational activity, animals, sports, and mystery. From most to least prevalent, the specific characteristics found in the selected books were episodic, happy ending, exciting, confrontation of problem, characters with opposing views, and humor.

HAMMAN, VINCENT E. (1993, September). What are your students reading? *Iowa Reading Journal, 6,* 19–20.

Reports the results of a questionnaire mailed to 61 media specialists in public and private schools of one city to determine the eight books most commonly checked out by primary grade pupils and the eight books most commonly checked out by intermediate pupils during the 1992–1993 school year. At the primary level, the list included *The Polar Express, Where's Waldo, Amelia Bedelia, If You Gave a Mouse a Cookie,* and *Clifford, The Big Red Dog.* Some of the titles at the intermediate level were *Charlotte's Web, The Secret of the Old Mill, Ramona the Brave,* and *There's a Boy in the Girls' Bathroom.*

IV-16 Attitudes and affect toward reading

Morrow, Lesley Mandel. (1992). The impact of a literature-based program on literacy achievement, use of literature, and attitudes of children from minority backgrounds. *Reading Research Quarterly, 27,* 251–275.

Ascertains if literacy achievement, literature use, and reading attitudes of children with diverse backgrounds are positively affected by a reading and writing program that fosters pleasurable encounters with literature. Subjects were 72 black, 62 white, 23 Asian, and 9 Hispanic children from nine second grade classrooms within two schools in one district. Three classes each were randomly assigned to one control group and two experimental groups, E1 and E2. For 1 year, children in the control group received the basal reading instruction implemented prior to the study. Children in E1 and E2 received the literature-based reading and writing program in conjunction with the basal program; children in E1 also received a home reading program. A variety of measures were administered to determine treatment effects on (1) children's story comprehension, (2) children's ability to create oral and written stories, (3) children's language complexity and vocabulary development, (4) children's performance on the reading and language tests of the CTBS, and (5) attitudes of children and teachers toward literature in the reading program. Data were analyzed using one-way repeated measures ANCOVA with pretests serving as covariates and posttests as dependent variables. Results of most analyses indicated that E1 and E2 groups excelled over controls but were not significantly different from each other. ANCOVA for the CTBS reading and language arts subtest scores showed no significant differences among groups. Interview data revealed that all facets of the literature program were positively received by both teachers and children. Children in E1 and E2 reported an increased use of books over the period of the study.

McGinley, William, & Kamberelis, George. (1992). Personal, social, and political functions of children's reading and writing. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 403–413). Chicago, IL: National Reading Conference.

Examines the personal, social, and political functions that underlie and motivate the self-selected reading and writing of children. Five third graders from an intact inner-city classroom were selected for the case analyses. The researchers observed classrooms 4 days a month for 7 months and participated in a variety of reading and writing activities. Written samples of work were collected and semistructured interviews were conducted with the children on a monthly basis. All interviews were coded using a taxonomy, and individual comments parsed from transcripts were coded. The overwhelming proportion of children's reading and writing functioned in personal ways, serving as vehicles for helping them explore themselves, identify with role models, derive enjoyment and entertainment, savor past experiences, and objectify and reconcile problematic emotions. Although they occurred with less frequency, literacy events also served social and political functions in helping children affirm or transform social relationships in their immediate world and understand and consider possibilities for resolving social problems. Children often associated multiple functions with a single book or written piece.

Hudley, Cynthia A. (1992, November). Using role models to improve the reading attitudes of ethnic minority high school girls. *Journal of Reading, 36,* 182–188.

Reports the results of fieldtesting an intervention designed to motivate Hispanic and African American high school females to persist in their academic endeavors, use the available school and community resources, and develop an interest in recreational reading. Participants were girls (90% Latina) in the 9th through 11th grades, ranging in age from 14 to 17 years.

From an initial pool of 50, a core group of 28 made up the study sample. They attended 12 program sessions and met a range of successful Hispanic and African American female role models. To measure program effects on student attitudes, the Demos D Scale—a standardized measure of student attitudes—was completed by all students in attendance at the first and last sessions. This yielded four subscales: attitudes toward education, teachers, school behavior, and peer and parent influences on school experiences. Data were evaluated using a series of paired sample *t* tests to evaluate the differences between group means for pre- and postmeasures. Findings demonstrated statistically significant differences on all subscales.

MANY, JOYCE E., & WISEMAN, DONNA L. (1992, September). The effect of teaching approach on third-grade students' response to literature. *Journal of Reading Behavior, 24*, 265–287.

Examines the effect of three teaching approaches on 120 third graders' responses to three picture books. Subjects were randomly assigned to three treatments: literary analysis, where the focus was on identifying and critiquing literary elements; literary experience, where students lived through and reacted to the storyline; and no discussion. The literary-experience discussions concerned the secondary world created in the story and the children's thoughts and reactions. The literary-analysis group identified and critiqued literary elements through character development, problems and solutions, and themes. In the no-discussion group, pupils wrote in response to an open-ended probe. Open-ended written responses to stories were collected and classified according to stance or purpose for writing. Responses were grouped as aesthetic, efferent, or having no primary focus. Across all treatment groups, the preferred purpose for writing was to focus on the aesthetic experience. Subjects in the literary-analysis and the no-discussion groups gave more efferent responses than those in the literary-experience group. Subjects from the literary-analysis group focused on literary elements. Subjects who had no discussion generally retold the story. Subjects from the literary-experience group wrote responses indicating more involvement in the story and more linking of the story to real persons and events.

JOHNSON, CAROL SCHULTE, & GASKINS, JAN. (1992, Summer). Reading attitude: Types of materials and specific strategies. *Reading Improvement, 29*, 133–139.

Examines children's attitudes toward specific materials and strategies used in a year-long program to enhance literacy. Subjects were 24 fourth graders who experienced five different grouping and material structures and a variety of literature activities. Subjects were asked to rank their feelings about specific materials and strategies using a scale ranging from like most to like least. Another scale used to rate reading, discussion, and enrichment activities ranged from crummy to fantastic. Statistical analysis of the data showed that students express positive and negative attitudes about specific materials and strategies used to improve reading. Children's strongest negative feelings were expressed in reference to basals, with faster readers being most negative. Children also disliked workbooks and answering written questions. An overall positive preference was expressed for both the basal group and same literature group and the literature groups reading different books. Children with reading difficulties preferred reading at their own pace, while faster readers preferred not to be interrupted while reading.

OLDFATHER, PENNY. (1993, May). What students say about motivating experiences in a whole language classroom. *The Reading Teacher, 46*, 672–681.

Describes findings from an 8-month collaborative classroom inquiry into pupil motivation in which fifth and sixth graders participated as coresearchers. The combined grade 5–6 classroom is described as a place where children were actively engaged in an integrated, thematic curriculum; they chose books to read, shared books, and kept dialogue journals and reading logs. Reported are insights from children relative to the motivating power of various aspects of their school environment. The article concludes with a summary on motivation as empowerment.

ALEXANDER, J. ESTILL, & COBB, JEANNE. (1992, October). Assessing attitudes in middle and secondary schools and community colleges. *Journal of Reading, 36,* 146–149.

Presents a review of literature detailing the value and methods of attitude assessment with readers at the middle, secondary, and community college levels. Lists of frequently used instruments for measuring attitudes and resources about attitude and reading are presented. Needs in attitude assessment research (e.g., innovative techniques, authentic measures, qualitative research) are also suggested.

JANSEN, MOGENS (ED.). (1993). *Read in school—But also outside school!* Copenhagen, Denmark: Danish National Institute for Educational Research.

Evaluates the effects of introducing an additional period of reading instruction per week on pupils' reading competence. The project included 70,000 children in grades 3 and 4. Two framework factors—number of periods and ratio—were examined to determine whether the benefit of the additional period was influenced by the total number of periods or the number of children in the class. Reading competence was investigated using reading tests of decoding and comprehension. Functional competence was examined by questionnaires. Interviews of 16 pupils demonstrating good results on reading tests were conducted to identify characteristics of well-functioning readers. Data were also gathered on the framework and organization of the teaching. Qualitative interviews were conducted with 20 teachers to obtain their views on the impact of the additional period for reading instruction. No increase in reading competence could be established as a result of the additional period. Furthermore, classes with relatively few reading periods showed the same level of reading competence as classes with relatively many periods. The use of reading in everyday life proved decisive for reading competence. Approximately 5% of the pupils, the poor readers, did not read except during reading lessons. There were no discernible differences in motivation for reading or attitude toward reading as a result of the extra instruction.

GILLESPIE, CINDY. (1993). College students' reflections on reading. *Reading Horizons, 33,* 329–340.

Reports findings from a 15-item, open-ended, untimed questionnaire administered to 191 students enrolled in a semester-long developmental reading course. Questions examined definitions of reading, attitudes toward reading, self-concepts related to reading, and recollections of learning to read, both at home and at school. Students appeared to have a narrow definition of reading, with a skill-based or phonetic emphasis—if they had a definition at all. Approximately as many students considered themselves readers as nonreaders. Seventy-one percent said that they found time to read for pleasure for several hours weekly; 80% reported reading assigned class texts, highlighting, taking notes, and outlining as they read. No evidence suggested that students developed either positive or negative attitudes from their reading experiences at home, but over 33% reported negative responses connected to learning to read at school. Two-thirds reported their best experiences with reading included reading novels, while 72% reported their worst reading experiences related to oral reading and book reports. Data suggest the need for including more diagnosis and instruction in affective areas in college developmental classes.

CUNNINGHAM, LAWRENCE J., & GALL, M.D. (1990, Spring). The effects of expository and narrative prose on student achievement and attitudes toward textbooks. *Journal of Experimental Education, 58*, 165–175.

Compares attitudes and achievement resulting from reading historical information presented in conventional expository style and in narrative style. Subjects were 313 ninth graders. Two versions of a textbook chapter designed to meet the same instructional objectives were written. A 35-item domain-referenced achievement test was administered 9 days prior to instruction and on the first school day following instruction. An attitude scale was also administered before and after treatment. After treatment, 30 randomly selected students from each treatment group were interviewed. When asked to examine the version of the textbook chapter that they had not used, the majority of students interviewed preferred the narrative version. However, ANCOVAS revealed no significant difference between treatment groups on achievement and attitudes. Teachers preferred the expository version.

IV-17 Personality, self-concept, and reading

FARRELL, EDWIN. (1990). *Hanging in and dropping out: Voices of at-risk high school students*. New York: Teachers College Press.

Collects dialogue data from 73 at-risk adolescents using peer collaborators as interviewers. Students were enrolled in a cooperative dropout prevention program in which they received high school credit for attending classes at a local community college once a week. Students referred themselves to the program or were referred by school personnel; they were admitted after an interview with school staff. With the help of the collaborators, themes were identified from the interview transcripts that addressed three questions: social pressure, school pressure, and boredom in school. In a second round of data collection, the author and collaborators identified the interviewees' inability to integrate their competing selves (self in family, sexual self, self as loyal friend, self in peer group, self as student, self as parent, and self as my work) into one identity. The book looks at each of the competing selves, using the subjects' own words as much as possible. The social mechanisms affecting self-development are pointed out, and means that schools can use to help attain student self-integration are suggested. In the chapter devoted to the self as student, it is noted that most of the subjects did not want to fail, but many had been retained at least once. Many were critical of schools and teachers, while others blamed their academic problems on themselves. The word most used to characterize school was "boring."

RODRIQUEZ-SUTIL, CARLOS; CALONGE, ISABEL; & SCOTT, RALPH. (1992, June). Academic learning problems and Rorschach indices: A Spanish replication. *Perceptual and Motor Skills, 74*, 771–778.

Compares Rorschach indices of children judged by teachers as reading deficient or not deficient. Subjects were 15 pairs of children matched by sex, SES, CA, and IQ. All subjects were enrolled in grades 3 to 5 in an urban public school. Four trained female examiners administered the Rorschach. Responses of children with reading deficiencies were characterized by low perceptual accuracy and low self-concept, with inconsistent findings on measures of reactivity. Results supported findings of other studies involving Rorschach indices of LD and non-LD students.

IV-18 Readability and legibility

Meyer, Bonnie J.F.; Marsiske, Michael; & Willis, Sherry L. (1993). Text processing variables predict the readability of everyday documents read by older adults. *Reading Research Quarterly, 28*(3), 234–249.

Presents and tests an eight-step model designed to predict the difficulty older adults will have in reading documents such as charts, schedules, tables, labels, and forms. Also examines whether factors found to influence learning from and memory of expository and narrative texts also influence comprehension from documents. Subjects were 482 adults ranging in age from 52 to 93 years. Subjects completed a 5–10 hour battery of tests, as well as a take-home questionnaire packet. Measures included the ADEPT ability battery and the ETS Test of Basic Skills. Individual components of the readability model were simultaneously entered into a multiple regression, with the sample proportion incorrect for each item as the dependent variable. The correlation coefficient was .54 between the readability scores for the test items predicted by the model and the percentage of older adults correctly answering those items. The obtained beta weights provided a formula for weighting and summing model elements into a total readability score.

Fatt, James Poon Teng. (1991, October). Text-related variables in textbook readability. *Research Papers in Education, 6*, 225–245.

Examines text-related variables such as word frequency, sentence complexity, and vocabulary load in assessing the readability of three secondary human and social biology textbooks. Variables of content and noncontent words, technical and nontechnical words, rare and frequent words, word repetitions, and sentence complexity were considered. To establish the significance of these variables in readability, they were intercorrelated with readability estimates from teacher and student judgments, results of cloze tests, and Fry readability scores. Ten cloze tests with every fifth word deletion were developed from the texts, administered to 397 secondary students, and scored for exact-word replacements. Both the students and 85 biology teachers were then asked to respond to the readability of the passages through six Likert-type items; the Fry graph was used to analyze the 10 sample passages. Based on mean cloze scores, the readability of these textbooks was found to be at the students' frustration level. Sentence length was inadequate as a measure of syntactical complexity or text difficulty. Of the variables examined, only teachers' judgments of language correlated significantly with the cloze scores. The percentage of technical words and the repetition of content words (technical and nontechnical) were low. Students seemed to judge the text language as difficult when they found a high percentage of technical words in the passages. However, neither the percentage of technical words nor of nontechnical words correlated significantly with cloze scores.

Biersner, Robert J. (1992, June). Assessing cognitive domain levels of instructional materials. *Perceptual and Motor Skills, 3*, 1010.

Determines the validity of two readability formulas as measures of cognitive complexity. Materials used for analysis were 145 passages quasirandomly selected from instructional materials developed for a Navy correspondence course and multiple-choice and true-false items that accompanied each passage. Test responses of 30 readers were classified as nonerror sample ($\underline{n} = 80$) or error sample ($\underline{n} = 65$). Readability of the materials was computed on the basis of the Flesch and the Smith and Kincaid formulas. Cognitive complexity of each question was rated on a four-point scale based on four cognitive domain levels; two college students read the material and rated the cognitive complexity needed to answer a question based on the material. Results revealed no significant differences between the Flesch and the Smith and Kincaid grade levels assigned to nonerror passages, error passages, or questions. However, readability level did not account entirely for the material's cognitive complexity.

HAMID, P. NICHOLAS. (1992, June). Colour of reading material and performance decrement. *Perceptual and Motor Skills, 74,* 689–690.

Examines the influence of paper color on reading performance. Thirty-two students in a Human Potential class were asked to read a lengthy booklet printed on pink, yellow, blue, or green paper. Prior to and following the reading assignment, students performed a timed letter-cancellation task in which the number of *p*s or *d*s cancelled in an array of letters was the dependent variable. ANOVA procedures applied to the data indicated warm colors (pink and yellow) resulted in a greater decrement in correct letter cancellation than cold colors (blue and green).

IV-19 Literacy acquisition

STANOVICH, KEITH E. (1991). Changing models of reading and reading acquisition. In Lawrence Rieven & Charles A. Perfetti (Eds.), *Learning to read: Basic research and its implications* (pp. 19–31). Hillsdale, NJ: Erlbaum.

Reviews recent research on reading acquisition with particular focus on word recognition. Attention is paid to research conducted with eye movement studies, phonological sensitivity and early reading acquisition, and controversies about decoding and the regularity of English. The author contends that the top-down versus bottom-up controversy concerning issues in word recognition has been resolved to a large extent and that the newer research is now focused on microanalyses of word learning, especially during the earliest stages of reading acquisition. The questions being addressed are increasingly specific, an indication that reading research has progressed.

PERFETTI, CHARLES A. (1991). Representations and awareness in the acquisition of reading competence. In Lawrence Rieven & Charles A. Perfetti (Eds.), *Learning to read: Basic research and its implications* (pp. 33–44). Hillsdale, NJ: Erlbaum.

Presents a theoretical account of how a child acquires competence in reading with special attention to the role and relation of phonemic knowledge to reading acquisition. In building his argument, the author presents supporting research. It is the author's view that skilled reading is described by a Restricted-Interactive Model in which word representations acquire connections between phonemic and graphemic segments with reliable, precise spellings uninformed by rules. Decoding permits the lexicon to increase by recognition of new words. However, decoding changes its character as words move from the functional lexicon to the autonomous lexicon. Preliterate knowledge of speech sounds is useful in permitting the child to acquire competence in reading. Instruction in phonemic awareness is of benefit to children who lack knowledge of speech sounds. It is contended that reflective phonemic knowledge is not a prerequisite to word reading. The research does demonstrate the existence of an enabling relation between explicit phonemic knowledge and learning to read.

BYRNE, BRIAN (1991). Experimental analysis of the child's discovery of the alphabetic principle. In Lawrence Rieven & Charles Perfetti (Eds.), *Learning to read: Basic research and its implications* (pp. 75–84). Hillsdale, NJ: Erlbaum.

Presents research on how novice readers become aware of the systematic basis of an alphabetic orthography. The author's research suggests that children learn to associate some distinguishing feature of a printed word with its spoken counterpart as a whole. Correspondences at the basic phonemic level are not detected readily once a child has learned to read families of related words. Phonemic awareness alone is not enough to produce alphabetic insights but needs to be supplemented by direct letter-sound training. Phonemic awareness and letter-phoneme awareness act in a complementary fashion to generate an understanding of alphabetic orthography as a child learns to read his or her first words.

HALL, NIGEL. (1987). *The emergence of literacy*, Portsmouth, NH: Heinemann.

Views the research literature relevant to how young children learn about literacy prior to formal schooling. The emphasis is on British research conducted in the 15 years prior to the book's publication but includes research conducted elsewhere. It is the author's stance that parents facilitate the emergence of oral language as well as reading and writing but generally do so informally. The understanding of environmental print and continuous text are covered in a chapter on the emergent reader, while the emergence of writing is considered in a separate chapter. Research is cited which supports the view that children are not cognitively confused relative to literacy acts but exhibit clarity in their understanding of and approach to literacy. Children create their literacy in contexts where literacy is a meaningful event, where they see others participating in purposeful literacy events, where individuals discuss their literacy activities, where children have opportunities to participate in literacy, where child-initiated literacy behavior is approved and reinforced by adults, and where children's efforts toward literacy are treated with seriousness. In a final chapter, the author deals with emergent literacy in the school setting.

KANTOR, REBECCA; MILLER, SANDRA M.; & FERNIE, DAVID E. (1992). Diverse paths to literacy in a preschool classroom: A sociocultural perspective. *Reading Research Quarterly, 27*, 185–201.

Analyzes the everyday uses of literacy in a preschool classroom to determine the ways that literacy learning is interwoven with other purposes of the school experience or with the social dynamics of particular classroom subgroups. Children, ages 3–5, attended preschool sessions four afternoons per week for 2.5 hours each day. While some literacy activities routinely provided in the preschool context stemmed from formal events such as story time and journal writing, most were generated by teachers responding to the needs and interests of the children as they spontaneously expressed themselves. Data collection occurred over a three-quarter university schedule (Phase I) and included video recordings taken of the first 2 weeks of each quarter from six locations in the classroom, transcriptions of the recordings, field notes written daily by four participant observers, interviews with children and their parents, retrospective journals kept by the two teachers, and notes made by the research team during weekly meetings. Data selected for in-depth analysis (Phase II) stemmed from four literacy laden events occurring daily in the classroom context as observed in Phase I: two school culture events, and two peer culture events. Ethnographic analyses suggested that a fundamental relation exists between a particular classroom configuration and literacy learning, with print having the power to support the social as well as educational needs of young learners. Analyses of school culture events revealed literacy as a vehicle for becoming a group member and as a means to learning collaboration. Analyses of peer culture events indicated literacy as a vehicle for negotiating play and friendship.

NEUMAN, SUSAN B., & ROSKOS, KATHY. (1992). Literacy objects as cultural tools: Effects on children's literacy behaviors in play. *Reading Research Quarterly, 27*, 203–225.

Explores the effects of deliberate infusion of the preschool play environment with familiar literacy objects that reflect equally familiar literacy contexts. Subjects were 91 preschoolers, ages 3–5 years, from two day care centers in an urban metropolitan area. Centers were randomly designated as nonintervention (Site A) and intervention (Site B). During the 7-month intervention period, Site B was infused with a variety of authentic literacy objects in learning station settings that reflected authentic literacy contexts from everyday life. Teachers at both sites encouraged children to select many of their own activities and to learn from active exploration of materials in their respective environments. Data collected included children's scores on the Test of Early Reading Ability administered prior to intervention as well as a variety of baseline, mid-enrichment phase, and late enrichment phase data acquired through systematic observations of children's play behavior at both sites. Results of ANCOVA applied to frequencies of literacy demonstrations in spontaneous play indicated that children at Site B engaged in significantly more handling, reading, and writing than children at Site A. These demonstrations became more interconnected as literacy was increasingly integrated in children's ongoing play themes over the period of the study. Children at Site B also demonstrated a stronger reliance on language in communicating with others in literacy related play.

HURLEY, FRANCIS K. (1991, Spring). The literacy environment of a daycare center. *Reflections on Canadian Literacy*, *9*, 26–31.

Investigated the nature of storybook interaction, oral language literacy learning through play, and other instances of literacy learning in a daycare center. A middle-class daycare center was observed for 132 hours over the course of 6 months. Fourteen children attended the center, including 7 boys and 7 girls who ranged in age from 19 months to 5 years. All children were observed, with an emphasis on a "typical" 4-year-old girl. The data consisted of fieldnotes based on observation, a collection of the children's drawings, transcriptions of all storybook interactions, and transcriptions of interviews with daycare workers. Results of data analysis indicated that the children were read to on a daily basis but that the stories read differed from day to day and that children were not actively involved in these readings. When a caregiver asked questions about a story, the questions were generally at the literal level, and caregiver-child interactions suggested an expectation that the children produce the "correct" answer. Based on observations, the researcher does not characterize the atmosphere during storybook reading as a joyful literacy event. In the area of oral language, observations revealed that child talk occurred during free play, which constituted approximately 36% of the child's waking day. During other times of the day, children spent most of their time listening. In addition, free play time was often spent in dramatic or symbolic play. The research interprets this as a positive condition for laying the foundation for reading and writing development, as it might enhance the development of complete functional use of language, knowledge of the symbolic nature of language, knowledge of text autonomy, and the development of the imagination. During the remaining 64% of the day, children spoke very little. However, there was modeling by the caregivers of the functional value of literacy, the provision of purposeful literacy-related experiences, and the use and highlighting of environmental print. The researcher concludes that there were many positive literacy-related occurrences happening in the daycare, but the overall literacy environment was not wholly conductive to literacy learning.

FRANCIS, HAZEL. (1992, June). Patterns of reading development in the first school. *British Journal of Educational Psychology*, *62*, 225–232.

Explores differences between the patterns of progress in reading exhibited by children in the first school. Subjects were 20 boys and 30 girls attending a suburban primary school. They were identified at the time they entered school (approximately 5 years of age) and were tested at 6-month intervals. All testing was conducted by the researcher using the Schonell Graded Word Recognition Test. Schonell scores were analyzed using both a retrospective analysis and a prospective step-by-step analysis. Results suggested that the best readers at age 7 had exhibited steady progress over 2 years on a linear gradient established during or before the first few months in school. Others, however, exhibited curvilinear progress patterns, characterized by a gentle gradient over some months followed by a steeper incline which matched or exceeded the rate of progress of the better readers, in some cases catching up. The poorest readers at age 7 had not reached this point of catching up, though some were showing signs of being near to it.

STEWART, JANICE. (1992, November–December). Kindergarten students' awareness of reading at home and in school. *Journal of Educational Research, 86*, 95–104.

Investigates children's awareness of how they are learning to read at home and in school. Subjects included 46 kindergarten children selected from two schools that used different instruction for beginning reading. In one school the instruction was individualized and emphasized a whole language approach. Specific strategies included language experiences, shared reading and writing, and phonics. Instruction in the second school was structured around a commercial phonics-based beginning reading program that emphasized whole-class instruction. All subjects were interviewed in March and May of the kindergarten year and September of first grade with questions designed to tap their awareness of how they were learning to read. The Early Reading Test and a listening test were also administered in September and May of the kindergarten year and September of the first grade year to relate awareness to reading achievement. A parent questionnaire was administered to assess home support for early reading. The children's awareness responses were scored and analyzed to determine how they described learning to read (awareness of process) and what they said they used when learning to read (awareness of content). There was a significant change over time in the awareness of the children in both schools between March and May. There was no noticeable change in the home awareness from May to September.

DICKINSON, DAVID K., & TABORS, PATTON O. (1991, Fall/Winter). Early literacy: Linkages between home, school and literacy achievement at age five. *Journal of Research in Childhood Education, 6*, 30–46.

Reports on a continuing investigation of the relation between language and literacy and a variety of home and preschool predictors. Data hypothesized to be predictors were introduced in previous articles by the authors. Language and literacy outcomes for subjects at age 5 were measured on the School and Home Early Language and Literacy Battery Kindergarten (SHELL-K). Correlational analyses revealed a strong relation between all outcome variables and home and preschool measures. Vocabulary, story comprehension, print skills, and definition skills assessed by the SHELL-K each were correlated with similar home and school predictors providing support for the notion that literacy based experiences at home and in the preschool give rise to general knowledge about literacy and print skills at age 5.

DICKINSON, DAVID K.; DE TEMPLE, JEANNE M.; HIRSCHLER, JULIE A.; & SMITH, MIRIAM W. (1992, September). Book reading with preschoolers: Coconstruction of text at home and at school. *Early Childhood Research Quarterly, 7*, 323–346.

Studies home and preschool book reading experiences of 3- and 4-year-old children longitudinally by analyzing the quantity and nature of talk during book sharing with adults. Subjects included 25 mother-child dyads from low-income families and preschool teachers. The mothers and the children (13 boys and 12 girls) were native English speakers. They were visited at home when the children were 3 years old and again at age 4. Mother-child interactions during the sharing of a favorite book were audiotaped, and notes were taken.

Mothers were also interviewed concerning literacy practices in the home. Classroom data were collected in preschool settings during the mid-winter months when the children were approximately 3 years old and again 1 year later. Teachers were asked to read a book to a group of children, and these group experiences were videotaped. Data were examined to determine the quantity and type of contributions made by the adults and children. Every utterance that was not a direct reading of text was coded in one of four categories. These were immediate (for example, labeling pictures), nonimmediate (for example, recall and analysis), organizational, or extending (for example, requesting clarification or feedback). The types of books read also were considered. At age 3, the primary focus of book readings in both settings was on immediate information. Compared with teachers, mothers were likely to use more extending and fewer organizational comments. When children were 4 years old, talk in the home was again dominated by immediate talk, but compared to when they were 3, there was less extending talk by mothers and more extending comments by children. In school there was more extending talk by teachers and nonimmediate utterances by children than was found the previous year. Home-school comparisons revealed more nonimmediate talk by teachers and children and more extending, organizational, and total talk by teachers.

CRAIN-THORESON, CATHERINE, & DALE, PHILIP S. (1992, May). Do early talkers become early readers? Linguistic precocity, preschool language, and emergent literacy. *Developmental Psychology, 28,* 421–429.

Conducts a longitudinal investigation of predictors of language and literacy skill development among young children. Participants were 25 children selected on the basis of verbal precocity at 20 months of age. Their performance was two standard deviations above the normed mean on one or more of the following measures: ELI Vocabulary, mean length of utterance (MLU), of Bayley Language subscale. Children were reassessed at 24 months, 2.5 years, and 4.5 years. There were three classes of predictor variables: measures of cognitive and language ability administered at age 24 months; a measure of child engagement during story reading at age 24 months; and parental reports of child exposure to literacy collected when children were ages 24 months and 4.5 years. There were two classes of outcome variables: language and cognitive measures at ages 2.5 and 4.5 and literacy measures at age 4.5. Measures of language and cognitive abilities were the PPVT-R, MLU, and the Stanford-Binet IV. Literacy measures were the Reading Recognition subtest of the PIAT, Clay's Concepts of Print test, a Phoneme Deletion task, and a measure of invented spelling skill. Reading precocity was defined as reading at or above normed or comparative second grade performance at age 4.5. Coefficients of correlation were determined, and multiple regression analyses were used to evaluate the predictive power of the early literacy exposure variables to literacy outcomes. Results revealed that although children remained verbally precocious, there was a low incidence of precocious reading. Exposure to instruction in letter names and sounds was a significant predictor of children's knowledge of print conventions, invented spelling, and phonological awareness at age 4.5. Frequency of story reading in the home and child engagement in a story reading episode at age 24 months were significant predictors of children's language ability at age 2.5 and 4.5 and knowledge of print conventions at age 4.5.

HENDERSON, SALLY J.; JACKSON, NANCY EWALD; & MUKAMAL, REISA A. (1993). Early development of language and literacy skills of an extremely precocious reader. *Gifted Child Quarterly, 37,* 78–83.

Documents the development of language and literacy skills in a gifted male child prior to age 4. Data consisted of historical information reported by the subject's mother in reference to his reading development prior to age 2.7, observations and standardized test results on reading and writing collected between the time the child was 2.7 and 3.2, and other reports on the child's reading and writing development up to age 4. Observations compiled at the time the child was 3.2 indicated that his word recognition ability was at late first grade level and that he possessed good ability to utilize knowledge of letter-sound associations in decoding unknown words. Writing skills at a comparable level emerged by the time he was age 4. Hypotheses about the nature and measurement of emergent literacy in precocious children are presented.

BURNS, JEANNE M.; COLLINS, MARTHA D.; & PAULSELL, J. CHRISTINE. (1991, Summer). A comparison of intellectually superior preschool accelerated readers and nonreaders: Four years later. *Gifted Child Quarterly, 25*, 118–124.

Re-examines, after 4 years of formal schooling, the reading and written language abilities of a group of 19 intellectually superior 8- and 9-year-old children who had been identified as Accelerated Readers and Nonreaders at the age of 4 years. All subjects had previously participated in a study that examined specific factors in a supportive home environment related to early development of accelerated reading abilities. During the original study, all Accelerated Readers read at a mid-first to fifth-grade level, verbally produced vowel and consonant sounds when shown corresponding letters, and used invented spelling techniques. Nonreaders read no words and exhibited limited knowledge of letter-sound correspondences. When retested at the ages of 8 and 9 years using the WJPEB, the Accelerated Readers scored significantly higher than the Nonreaders on subtests of word attack ($p<.07$) and dictation ($p<.07$). However, no significant differences were found on subtests of word recognition or comprehension. Results of parent questionnaires indicated that both groups were exposed to similar types of activities; however, a significant difference was found for the number of times children were read to at ages 6 and 7, with parents of Nonreaders reporting reading a greater number of times. A review of school-based data indicated that the majority of the subjects in the two groups had been provided the same type of basal reading instruction upon entry into elementary school.

MANN, VIRGINIA A. (1993, April). Phoneme awareness and future reading ability. *Journal of Learning Disabilities, 26*, 259–269.

Investigates the relation between phoneme awareness in kindergarten and reading performance in first grade. The subject pool was drawn from two different public school systems whose pupils were predominantly white, middle-class children. All kindergarten pupils with parental consent were tested in May. The sample included 100 children whose ages varied from 64 months to 81 months. Approximately one year later, 79 of the children were available for the first grade phase of testing. Kindergarten testing included two tests of phoneme awareness (a phoneme segmentation test and an invented spelling test), the Figure Copying Test, and the Draw-a-Man test. First grade testing was focused on reading ability and IQ. Measures administered to all subjects included the Word Identification and Word Attack subtests of the WRMT, and the vocabulary and block tests from the WISC-R. Results revealed that both tests of phoneme awareness were significantly related to reading ability and predicted between 30% and 40% of variance in first grade reading performance. Scores on the tests of visual-motor ability had a less systematic, less substantial relation to first grade reading ability.

BYRNE, BRIAN. (1992). Studies in the acquisition procedure for reading: Rationale, hypotheses, and data. In Philip B. Gough; Linnea C. Ehri; and Rebecca Treiman (Eds.), *Reading acquisition* (pp. 1–34). Hillsdale, NJ: Erlbaum.

Studies the default acquisition procedure in reading in which the author argues that phonemic awareness is essential for progress to the alphabetic stage in reading acquisition and that if the child's usable knowledge about speech structure does not include the phonemic principle, he or she will read logographically at first. Several sets of previously reported data by the author are presented, beginning with a demonstration of nonanalytic learning of an orthography by literate adults. The orthography taught included symbols for voiced and unvoiced phonemes. Four symbol-sound pairs were taught until subjects could say the phoneme when its symbol was presented. An 8-item transfer task was then presented. The adult subjects did not figure out the symbol-feature mapping and demonstrated the persistence of nonanalytic learning. A second section of the chapter contained the reports of a series of experiments on paired-associate learning of first words using preliterate children as subjects. In the first experiment, eight preschool children were individually taught a word list. Lists were presented eight times in a prearranged order. For the first two presentations, the experimenter showed the child the word and pronounced it, then asked the child to say it; on the following presentations, the child was asked to produce the word and was corrected for a wrong response. Words were visually and auditorily similar and less similar. The visually and auditorily less similar list was learned best; that is, similar lists were learned more slowly than less similar ones. The two experiments in this section of the chapter were interpreted as being consistent with the proposition that reading in the logographic stage is an instrance of paired-associate learning. The third section of the chapter reports a series of nine experiments interpreted as indicating that preliterate children do not deduce symbol-sound relationships. The author notes that teaching children to read word families does not guarantee that children will work out grapheme-phoneme correspondences on their own. A final set of experiments report on conditions that promote an understanding of the alphabetic principle. Twelve preliterate children were supplied with increasing amounts of information about phonemic organization and how letters represent sounds. Children were first taught to segment words into sounds. Awareness of segmental structure did not guarantee insight into the alphabetic principle. Data from this series of studies led to the conclusion that once the alphabetic principle is understood, it is transferred to other sounds and letters in the developing vocabulary.

TANGEL, DARLENE M., & BLACHMAN, BENITA A. (1992, June). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Reading Behavior, 24*, 233–261.

Ascertains if kindergarten training in phoneme awareness affects children's performance in invented spelling. Subjects were 149 children selected from 18 all-day kindergarten classrooms in four demographically comparable low-income, inner city schools. Prior to treatment, the 77 children in the experimental group did not differ from the 72 children in the control group in age, sex, race, PPVT-R, phoneme segmentation, letter name and letter sound knowledge, or word identification. Treatment for the experimental group consisted of training in phoneme segmentation for an 11-week period during March, April, and May of their kindergarten year. Following training, results of independent *t* tests showed children in the experimental group were significantly superior to the control group in posttest performance in phoneme segmentation, letter name and sound knowledge, and reading of phonetically regular words and nonwords. Additionally, the invented spellings of children in the experimental group were found to be developmentally superior to those of children in the control group.

SPECTOR, JANET E. (1992, September). Predicting progress in beginning reading: Dynamic assessment of phonemic awareness. *Journal of Educational Psychology, 84*, 353–363.

Compares the capabilities of dynamic and conventional measures of phonemic awareness for predicting beginning reading success. Of specific interest was whether or not measures of phonemic awareness that allow for supportive prompting are better predictors of reading success than measures which do not allow for such prompting. The subjects, 38 non-reading kindergartners, were assessed individually in the fall to determine their entry level skills in letter and word recognition, invented spelling, phoneme segmentation, phoneme deletion and dynamic phoneme segmentation. The same measures, with the exception of the dynamic phoneme segmentation test, were administered the following spring. Multiple regression analysis revealed added predictive benefits for the dynamic measure of phonemic awareness.

WIMMER, HEINZ; LANDERL, KARIN; LINORTNER, RENATE; & HUMMER, PETER. (1991). The relationship of phonemic awareness to reading acquisition: More consequence than precondition but still important. *Cognition, 40*, 219–249.

Conducts three studies to explore the emergence of phonemic awareness and its relation to literacy. Study 1 assessed phonemic awareness before school and examined its relation to any reading abilities before school and to reading and spelling competence at the end of Grade 1. Study 2 replicated and extended the findings of Study 1 by assessing phonemic awareness and phonemic sensitivity, via a pseudoword repetition task, before reading instruction and at the end of Grade 1. Study 3 examined the validity of the vowel substitution task as a measure of phonemic awareness by examining its relation to both phoneme counting and syllable counting. Subjects for these studies were drawn from first grade and kindergarten classes of elementary schools in Salzburg, Austria. Phonemic awareness was tested using a vowel substitution task designed by the researchers. Other measures included letter knowledge, nonword and word reading, text reading (a two-sentence story consisting of 23 words), nonword spelling (a test for phonemic segmentation ability), reading logos and sight words, pseudoword repetition, and syllable and phoneme counting. Data analyses revealed a specific predictive relation between initial phonemic awareness differences and success in learning to read and to spell. It was found that phonemic awareness differences before instruction predicted the accuracy of alphabetic reading and spelling at the end of Grade 1 independent from IQ and initial differences in letter knowledge and reading. Pupils with high phonemic awareness at the beginning of Grade 1 showed uniformly high reading and spelling achievement at the end of Grade 1. Good progress in learning to read and to spell was also evident in the majority of children who showed no phonemic awareness at the beginning of reading instruction, but some of the many children with low phonemic awareness before instruction experienced difficulties in learning to read and to spell.

LEVIN, IRIS, & KORAT, OFRA. (1993, April). Sensitivity to phonological, morphological, and semantic cues in early reading and writing in Hebrew. *Merrill-Palmer Quarterly, 39*, 213–232.

Studies early literacy in Hebrew by analyzing the attempts of nursery children and kindergartners to write and read pairs of nouns. Participants were 64 urban, middle-class preschoolers, equally divided by age group and gender. Age means in years and months were 5.0 and 6.1 for nursery school children and kindergartners, respectively. No formal instruction in reading or writing was given in preschool, though children were shown how to write and recognize their names. Children were interviewed individually on 4 successive days. Each day they dealt with four pairs of nouns, one pair from each of four categories (plurality, collection, inverse collection, and gender). The noun pairs were selected to represent differences along the linguistic dimensions of phonology, semantic content, and morphological complexity. First they wrote them down and next they identified the words from printed cards. Kindergartners wrote significantly longer the words which sounded longer, irrespective of category. Nursery children wrote significantly more signs for the longer words on plurality and collection. These results suggested a predominant phonological orientation among kindergartners and a mixed phonological-semantic one among nursery children. To analyze reading performance, a series of single t tests was performed. Both age groups were significantly more often correct than incorrect on plurality and collection. On these categories, correct judgments could be derived from phonological or semantic considerations. Kindergartners were significantly more correct on gender, where semantic cues were uninvolved and correct judgments could be derived from phonology or morphology. Nursery children were not. Children of both age groups exhibited sensitivity to all three linguistic dimensions by writing longer the words that sounded longer, denoted more objects, and were composed of more morphemes. With age, children's sensitivity to phonology increased and sensitivity to semantics decreased.

MORRIS, DARRELL. (1993, May). The relationship between children's concept of word in text and phoneme awareness in learning to read: A longitudinal study. *Research in the Teaching of English, 27*, 133–154.

Tests a developmental hypothesis about the growth of word knowledge in kindergarten readers: beginning consonant knowledge precedes concept of word in text, which precedes phoneme segmentation ability, which precedes word recognition. Subjects were 53 kindergartners from three classrooms who were tested at 2-month intervals during a school year. Tasks administered were alphabet recognition, beginning consonant awareness, sentence-reading and book-reading context, phoneme segmentation, and word recognition of decodable (CVC) words and basal words. Overall, kindergarten children's performance conformed to the predicted developmental sequence. Guttman scale analysis was applied to determine how each individual child's performance conformed to the predicted pattern. A child's stable concept of word in text seemed to facilitate a child's awareness of the sequential sounds.

HUGHES, MARGARET & SEARLE, DENNIS. (1991). A longitudinal study of the growth of spelling abilities within the context of the development of literacy. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 159–168). Chicago, IL: National Reading Conference.

Reports on stages of spelling development and how progress through these stages relates to reading and writing development. The study follows two groups of children from mid-kindergarten to Grade 5. The sample from School 1 consists of 19 fourth graders from an original kindergarten sample of 24. Subjects from School 2 were in second grade and consisted of 14 boys and 9 girls. Data were collected and examined for patterns of development and emerging relation through interviews with parents, teachers, and children; informal and formal assessment measures of spelling, reading, and writing; samples of children's work; and observations of classroom activities. Data were collected yearly in each school in three 6-week periods. A modified analytic induction approach was used to examine the information discovered. Findings substantiate the direction of spelling development described in previous research. Phonemic awareness, concept of word, and reading fluency contribute to the early stages of spelling development.

BARNHART, JUNE E. (1992). Children's emergent reading behaviors across different kinds of text and the relation to writing systems. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 193–201). Provo, UT: College Reading Association.

Substantiates developmental categorization schemes for reading attempts observed during storybook reading and writing and reading self-composed text. Subjects were 32 kindergarten children from two classrooms in a large school district. Each child was involved separately in storybook reading reenactment and storywriting production and reading. All sessions were taperecorded, transcribed, and categorized. Analyses of the patterns of behavior observed in subjects' storybook reading attempts validated existing categorization schemes proposed and used in earlier studies with younger children. Similarities and differences in task results are compared to earlier research.

Wagner, Richard K.; Torgesen, Joseph K.; Laughon, Pamela; Simmons, Karen; & Rashotte, Carol A. (1993, March). Development of young readers' phonological processing abilities. *Journal of Educational Psychology, 85,* 83–103.

Examines the nature and development of young children's phonological processing abilities by giving a battery of phonological tasks to groups of kindergarten and second grade children. Subjects were 95 kindergarten and 89 second grade pupils who were randomly selected from three elementary schools. Materials consisted of a battery of phonological tasks (phonological awareness tasks, phonological coding in working memory tasks, and phonological code retrieval tasks) and reference measures of cognitive ability (subtests of the Stanford-Binet Intelligence Scale and Woodcock-Johnson Psychoeducational Cognitive Battery, the Corsi Blocks task, and a visual search task) and word level reading (the Word Identification subtest from the WRMT). Confirmatory factor analysis was used to compare the fit of five proposed models to the data. The relative independence of phonological abilities from general cognitive ability was assessed by examining correlation coefficients between latent phonological abilities and a latent measure of cognitive ability. Relations between the phonological processing abilities and a measure of word recognition were also examined. Results revealed five distinct but correlated phonological processing abilities. Latent phonological processing abilities were more highly correlated with general cognitive ability than previous reports have suggested, although they accounted for variance in word recognition independent of general cognitive ability.

Beach, Sara Ann, & Robinson, Robert J. (1992, October–December). Gender and grade level differences in the development of concepts about print. *Reading Psychology, 13,* 309–328.

Examines the knowledge and understanding about print young children bring to school and how that knowledge changes as a function of grade in school and gender. Subjects were 145 preschool through third grade children (76 girls; 69 boys) who were randomly selected from three schools which differed in SES. All children were individually tested with Clay's Concepts about Print Test, an environmental print-in-context task, and a story-writing and reading task. Results indicated that children enter preschool with some knowledge about the functions and conventions of print but do not achieve mastery of these concepts until second or third grade. Means for both boys and girls increase as the children get older, with the exception that boys and girls reach ceiling level on the writing and rereading tasks. None of the tasks discriminated between the second and third graders. There was a significant gender effect favoring girls on the Concepts about Print Test and the writing and reading task; however, the boys scored significantly higher on the environmental print in context task.

IV-20 Studies on the reading process

Afflerbach, Peter P. (1990, Winter). The influence of prior knowledge on expert readers' main idea construction strategies. *Reading Research Quarterly, 25,* 31–46.

Reports on a study of the relation between prior knowledge and the strategies used by expert readers to identify and state the main idea of a text when the main idea is not explicit. Four anthropology doctoral students and four chemistry doctoral students participated in the study. Two paragraphs from each of the two fields of study were read by the participants. At the end of each sentence of each paragraph was a red maker signaling the participants to stop and verbalize the strategies they were using as they read. At the end of each paragraph, participants were asked to state the main idea of the passage. The think-aloud protocols were coded according to five strategies for main idea construction: draft-and-revision, topic and comment, automatic construction, initial hypothesis, and listing. Main effects included use of the draft-and-revision strategy significantly more often when reading unfamiliar than familiar text and automatic construction of the main idea when reading familiar rather than unfamiliar text. Further, the initial hypothesis strategy was used significantly more often when participants were reading unfamiliar text than when they were reading familiar text, and the reverse was true for the listing strategy. The author concludes that prior knowledge of a content area facilitates the automatic construction of the main idea of a text in that area.

McGINLEY, WILLIAM. (1992). The role of reading and writing while composing from sources. *Reading Research Quarterly*, *27*, 226–248.

Reports a model developed after studying seven college students' processes as they composed a text based on information from multiple sources. Data included transcripts of think-aloud protocols while reading two resource articles, videotapes and audiotapes of student writing sessions, students' written products, debriefing interviews with the students, and notes and observations collected by the researcher. Protocols were transcribed and segmented into communication units, time across task was calculated, communication units were associated with specific reading and writing activities, reasoning operations were coded, and written responses to questions on perceptions of the reading and writing activities were analyzed. Two of the seven students were studied in depth as case studies. Students spent the majority of the time reading, writing their drafts, or rereading their drafts and writing notes. Distribution of reading and writing activities changed at different points across the task. The process of composing from sources was both linear and nonlinear, as many activities were recursive. Students engaged in a variety of reasoning operations, with operations changing as they moved through the various processes. Debriefing interviews illustrated the multiple purposes that reading and writing notes served during the process, and the utility of rereading the essays.

SMITH, EDWARD E., & SWINNEY, DAVID A. (1992, July–September). The role of schemas in reading text: A real-time examination. *Discourse Processes*, *15*, 303–316.

Studies how the effects of schema availability and concept repetition affect on-line integration and memory for texts. Subjects, 40 college students, read eight vague texts, half of them preceded by a title that provided explicit information about the relevant schema and half without such information. Texts were presented line by line, with subjects indicating when they had finished reading each line. After reading each story on-line, subjects answered true and false questions and then were asked to supply written verbatim recalls. Average sentence reading time was significantly less when reading with a schema than when reading without one. Schema effect on reading time was largest for the first line of text, and then remained constant. Reading times were faster on repeated concepts when no schema was available, but no significant differences were noted when schemata were present. Recalls showed a greater number of correct words were included when a schema was available than when a schema was not given. Consistent intrusions were more common when schemata were present. Schemata appear to influence on-line text comprehension as well as recall.

EARTHMAN, ELISE ANN. (1992, December). Creating the virtual work: Readers' processes in understanding literary texts. *Research in the Teaching of English, 26*, 351–384.

Compares transactions of more- and less-experienced readers as they respond to two genres of literature. Subjects were 8 university graduate students of literature and 8 freshmen enrolled in composition classes. During five 1-hour sessions, each subject read two stories and two poems, completed a think-aloud protocol on each text, and participated in an exit interview on his or her experiences with reading in general and reading literature in particular. Exit interviews and think-aloud protocols were analyzed to determine: subjects' abilities to fill in gaps or places in the text where the reader must fill in information to make sense of the text; subjects' abilities to use a text's repertoire, or connections to reality outside of the text milieu; and subjects' abilities to assume multiple perspectives, or differing points of view with regard to the text. Findings indicated that while readers at both experience levels filled in text gaps, graduate students more often responded to gaps that were considered more difficult to fill. Graduate students also used text repertoires more widely to increase their understandings of the material. In comparison to freshmen, who tended to retain their initial points of view on a work, graduate students showed increased tendencies to change perspectives as they read, or more ability to view a text from multiple perspectives simultaneously.

KEENAN, MARIE. (1992, Summer/Fall). Six children's responses to literature. *Reflections on Canadian Literacy, 10*, 103–110.

Explores the nature of six children's responses to literature in the context of one classroom. Subjects were three Grade 5 and three Grade 6 children selected from a class of 56 who were team-taught by three teachers, Field notes, formal and informal interviews, taped responses and conversations of children, written responses, and artifacts and projects served as data sources. Descriptive data included dimensions of the classroom context and the experiences of the children in that context. Analyses identified trends in children's responses and the identification of various interpretive communities within the classroom context. When children felt the teacher was the authority, they responded the way teachers had responded to them and used teachers' examples and word choice. When children felt they had authority over their own responses, they often reflected on what was most meaningful to them. When pupils directed their own responses to literature, responses were usually longer, reflecting their own knowledge and personal relations with the story. Children seemed to construct each interpretive community according to their experiences and their changing social interactions.

SUH, SOYOUNG, & TRABASSO, TOM. (1993). Inferences during reading: Converging evidence from discourse analysis, talk-aloud protocols, and recognition priming. *Journal of Memory and Language, 32*, 279–300.

Explores the conditions under which inferences that connect goals to other goals and actions are made in narrative text. Students ($\underline{n}$=8) from a university served as paid subjects in the study. Eight pairs of goal-failure and goal-success stories which allowed or prevented inferences were constructed according to an adopted causal network, or discourse model. Each sentence of the story was typed onto a card which subjects were asked to read and talk aloud about. All students read all stories to total 64 protocols. Experiments 2, 3, and 4 tested the assumption that the talk-aloud data of Experiment 1 could predict the likelihood of online (during reading) goal inferences. Subjects were paid volunteers from a university (32, 24, and 32, respectively). The six stories that had produced significant between-version differences in goal references in Experiment 1 were used in all three experiments. Each sentence of the story appeared on a computer screen. The student pressed a button once he or she understood the sentence, and then the next sentence was shown. Subjects responded whether or not an inserted target probe (phrase containing the goal or entire goal sentence) had occurred previously in the current story. Each experiment sampled different locations in the story where inferences were likely to occur. Experiment 4 tested whether availability of goal information increased linearly or in an all-or-none fashion. The pattern of findings from Experiments 2, 3, and 4, corresponded with that found for the talk-aloud protocols of Experiment 1. The convergent evidence was found for inferences that relate subgoals and actions when they fit directly with a goal's plan, whether they are adjacent to the goal or at a distance in the text, and even when local causes and repeated arguments are available. During the reading of actions for the subgoal, the subgoal was mentioned frequently during talk-alouds whereas the superordinate goal was neither mentioned frequently nor was its recognition facilitated.

SIMPSON, MICHELLE L., & NIST, SHERRIE L. (1992). A case study of academic literacy tasks and their negotiation in a university history course. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 253–260). Chicago, IL: National Reading Conference.

Questions how tasks are communicated in a large undergraduate history course in relation to students' perceptions of the tasks and how strategies are selected in completing the task. There were 160 freshmen (58%) and sophomores (34%) enrolled in the course who participated in the study. Students completed a 2-item self-report checklist 2 days before each of the four exams (tasks). The items featured student perceptions of the task (memorize dates and statistics) and the strategies they were employing (reread and predict possible questions). Students' responses were tabulated for each of four exams and compared by their performance on the exam and overall academics. Field notes included observations made during each class, including lecture notes, recorded student and professor behaviors, and students' comments to class demands. The study found that the professor's communication of the task emphasized product to the exclusion of process, plans, or resources. Many students were confused about what they were expected to learn. Strategy employment and academic performance cannot be investigated in isolation from the task-negotiation process that occurs between teacher and student.

TRABASSO, TOM, & NICKELS, MARGRET. (1992, July–September). The development of goal plans of action in the narration of a picture story. *Discourse Processes, 15*, 249–275.

Studies how children and adults construct coherent narrations about events in a picture storybook. Using a corpus of narrations obtained from an earlier study, causal network representations were determined of narrations from 3-, 4-, 5-, and 9-year-old children and from adults. Analysis was applied at the causal level. Each person's network representation was analyzed for first- and second-order goals. Second-order goals first appeared with 4-year-olds and first-order goals with 5-year-olds. Developmental differences were apparent for children from age 3 to 5, with coherence and a goal plan showing in the narrations of 5-year-olds, while earlier narrations focused on describing and identifying actions. Nine-year-olds and adults showed nearly the same hierarchical goal plan.

MUTH, K. DENISE. (1992, July). Extraneous information and extra steps in arithmetic word problems. *Contemporary Educational Psychology, 17*, 278–285.

Investigates the types of misconceptions students have about solving word problems similar to those used on the National Assessment of Educational Progress tests (NAEP). In the first of a two-phase study, eighth graders completed NAEP-like problems with the absence or presence of extraneous information and containing extra steps or lacking extra steps. Problems were scored for correct answers and use of correct formulas. More problems were correctly answered without extraneous information than with extraneous information and without an extra step than with an extra step. Correct answers were positively correlated with correct formula use. In phase two, eight students were randomly chosen to think aloud as they solved the word problems used in Phase 1. Protocols from the think-alouds revealed misconceptions about solving word problems, faulty strategy use, and lack of appropriate strategy application.

ENTES, JUDITH. (1992, Fall). The presentation of time in short stories: Effects on the responses of developmental readers. *Research and Teaching in Developmental Education*, *9*, 19–28.

Describes and analyzes the reading process of four remedial reading college freshmen when they interacted with three short stories. The short stories were selected based on their representation of time—whether Consecutive Time (chronological) or Time-Shift (in which there is a changed order in the presentation). The researcher hypothesized that text organization influences a reader's stance—whether engaged or disengaged. Participants were encouraged to report their thoughts aloud and to ask questions as they read silently three stories with which they were unfamiliar. The investigator asked a set of questions after each story. Based on analysis of transcriptions of the think-alouds and questions, both engaged and disengaged stances were identified. All four readers were engaged with the chronologically ordered story. However, the researcher noted the readers' tendency to become disengaged when confronted with time shift. Engaged readers, when presented with time-shift structure, brought meaning to the text. Disengaged readers accepted inconsistencies or stopped reading. The researcher concluded that the ability to shift, including making shifts in time, enables readers to have an enriched reading.

MARTON, FERENCE; CARLSSON, MAJ ASPLUND; & HALÁSZ, LÁSZLÓ. (1992, February). Differences in understanding and the use of reflective variation in reading. *British Journal of Educational Psychology*, *62*, 1–16.

Characterizes secondary students' approaches to understanding difficult text. Subjects were 29 Hungarian and 31 Swedish secondary students. Subjects were asked to engage in repeated reading of a text by Franz Kafka. After each reading, students were asked questions requesting text recall, probing thoughts about what the author had to say, and requiring description of strategies used for understanding the author's message. Response analyses revealed a number of qualitatively different ways of deriving understanding, each based on the approach or perspective utilized. Some students utilized "reflective variation" as a reading strategy; that is, they applied alternative understandings of the story as a whole or of its constituent parts. Other students utilized "elaborative variation" as a strategy; they made explicit the implications of their understandings of the whole story or its parts. More advanced methods of text comprehension were highly related with using reflective variation as a strategy.

BLACK, JANIS H. (1993, April). Learning and reception strategy use and the cloze procedure. *The Canadian Modern Language Review*, *49*(3), 418–445.

Investigates the learning and reception strategies used by six female university students enrolled in a first-year French class as they complete a cloze passage. Students were assigned to the successful or unsuccessful group based on the scores received on a similar modified cloze test in the first semester examination. A cloze passage, adapted from text written by a native speaker, was devised to contain discourse features similar to those already practiced in class. Deletions were chosen to reflect the grammatical and lexical content of the course. Subjects were asked to think aloud in English while completing the 30–40 minute cloze exercise. After completion of the cloze, students did an immediate retrospection on the strategies, or thought processes, that seemed to be most useful in doing the task. The verbal report data were transcribed and analyzed for strategy frequency, quality, and distribution. All subjects used a wide variety of strategies with the distribution of strategies influenced by the learner's proficiency and learning style. Overall, students tended to use more monitoring and evaluating strategies than any other types. Learners were differentiated by the strategies they favored and how they were applied. Successful completion of the cloze was associated with multiple strategy use.

GORDON, CHRISTINE J. (1992). A case study of conceptual change. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 161–168). Chicago, IL: National Reading Conference.

Attempts to understand the kinds of mental models that a student constructs in science, how and why such models are constructed, and how and why these models change over time. Subject of the case study was one sixth grade male who was found to have misconceptions about a number of earth science concepts. The researcher met with the child twice a month for 1-hour sessions over the course of the year. Each session consisted of reading and thinking aloud using refutation text, discussion and talk about the text, concrete objects, models and diagrams, and dialogue response journal writing activities. Despite being verbal as a pupil, the young man could not always verbalize clearly his misconceptions of how and why he acquired concepts that he held. In some instances, he became aware, on his own, of an anomaly in his understanding but seemed to require a social dimension in order for knowledge construction or restructuring to occur. Scientific knowledge was acquired only gradually over a long period of time.

SPEARS-BUNTON, LINDA. (1992). Literature, literacy, and resistance to cultural domination. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 393–401). Chicago, IL: National Reading Conference.

Explores readers' volition and motivation for engaging or resisting text. The data centers on literature teaching, learning, and response from the perspective of 10 juniors from one honors English classroom in an inner city school. Information was derived from weekly interviews with students, daily classroom observations, focus groups, questionnaires, and writing samples collected over one year. Two categories emerged: alignment (where the readers position themselves in relation to the text) and valuation (the importance of the text to experiences and perceptions of the reader). Among the African American students, these categories were evident from the first exposure to African American literature. Students were able to personally identify with the language, theme, characterization, and world view of the text. However, among European Americans, the categories emerged gradually over time and across multiple texts. Students distanced themselves from African American literature by remaining silent and exhibiting expressions of discomfort. Over time, there was a gradual change toward reassessment of previous stereotypical perceptions of both groups with the exposure to African American literature.

GAMBRELL, LINDA B., & PALMER, BARBARA M. (1992). Children's metacognitive knowledge about reading and writing in literature-based and conventional classrooms. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 215–223). Chicago, IL: National Reading Conference.

Determines if there are differences between first and second graders' metacognitive knowledge about reading and writing with respect to literature-based and conventional programs. Subjects were 157 randomly selected first (n=79) and second (n=78) graders from two rural schools. Two years prior to the study one school had implemented an integrated literature-based language arts program while the second used a conventional basal series. Children were assigned to one of three interview conditions which focused on reading, writing, or both. The interviews consisted of fifteen questions designed to probe variables related to reading or writing processes and lasted approximately 20 minutes for each child. Interrater reliability for responses to the interview questions was .94 for reading and .93 for writing. Both first and second grade children in the literature-based classrooms reported greater metacognitive knowledge about reading and writing than those in conventional classrooms. These differences were more pronounced for writing than for reading at both grade levels.

BLOCK, ELLEN L. (1992, Summer). See how they read: Comprehension monitoring of L1 and L2 readers. *TESOL Quarterly*, *26*, 319–343.

Studies the comprehension-monitoring processes used in reading expository prose by 25 college freshmen who had English as their first or second language. Using the Descriptive Test of Linguistic Skills, sixteen were classified as proficient readers while 9 were considered nonproficient. Think-alouds were collected as subjects read materials taken from introductory psychology texts. Two areas appeared especially problematic: referents for demonstrative pronouns and definitions for unknown words. Two sentences, one containing a referent problem and one a lexical problem, were selected for in-depth monitoring. Overall, patterns suggested that subjects evaluated their comprehension, planned an action or solution, and checked the results of their action, revising where necessary. While both groups followed the same monitoring process, proficient ESL readers made less use of strategic plans and checked solutions less consistently and less explicitly. Fewer strategies were used for determining unknown words than for identifying pronoun antecedents. Overall, control seemed to depend more on reading ability than on language. Similarities were noted between proficient L1 and L2 readers and between less proficient L1 and L2 readers.

OTERO, JOSÉ; CAMPANARIO, JUAN MIGUEL; & HOPKINS, KENNETH D. (1992). The relationship between academic achievement and metacognitive comprehension monitoring ability of Spanish secondary school students. *Educational and Psychological Measurement*, *52*, 419–430.

Assesses the ability of Spanish high school students to monitor their comprehension while reading school-related text and explores the relation between their comprehension monitoring ability (CMA) and measures of their academic achievement. Specifically, the areas of metacognition studied were the readers' ability to recognize whether the text was understood and to take appropriate steps to regain understanding if problems were detected. Nine intact groups from five public schools were subjects and included five 12th grade classes and four 10th grade classes. Students read six short science passages, two buffers, and four passages containing explicit contradictions. Subjects read the text and identified difficulty by underlining problematic sentences and explaining the difficulty. They also rated comprehensibility of the various texts. Subjects then were given a booklet informing them about the contradictions in the texts and asking them to identify why they had not pointed out the contradictions. Subjects also were interviewed after testing to identify their reasoning. Scores for each subject were correlated with the previous year's academic grades, a composite GPA for the previous year, and the grades for the current year. Monitoring scores were higher at Grade 12 than at Grade 10. While coefficients between CMA and GPA were positive and statistically significant, they tended to be low, ranging between .176 and .375.

IV-21 Comprehension research

GAMBRELL, LINDA B., & JAWITZ, PAULA BOOKS. (1993, July/August/September). Mental imagery, text illustrations, and children's story comprehension and recall. *Reading Research Quarterly, 28*, 264–276.

Explores the influence of instructions to induce mental imagery and to attend to text illustrations on comprehension and recall of narrative text. Subjects, 120 fourth graders, were randomly assigned to four treatment conditions differing in the kind of instructions they were given: (1) to induce mental imagery when text was nonillustrated, (2) to attend to text illustration when texts were illustrated, (3) to induce mental imagery and attend to text illustrations when texts were illustrated, and (4) to read to remember text from the nonillustrated text (control group). Subjects read silently, did a free written retelling, and then responded to eight text-explicit and eight text-implicit cued recall questions. Free recalls were scored for propositions and story structure elements. On propositions recalled, the imagery and illustration group, the imagery-only group, and the illustrations-only group were statistically superior to the control group. On number of story structure elements recalled, subjects in the mental imagery and illustrations group were superior to other treatment groups. Differences were found among the specific story elements recalled as well. On total cued recall and on implicit cued recall, performance of subjects in the imagery plus illustrations group was statistically superior to that of subjects in the other groups. Comprehension performance appeared to be enhanced when students received instructions to induce mental imagery and attend to text illustrations.

KINCADE, KAY M. (1991, September). Patterns in children's ability to recall explicit, implicit and metaphorical information. *Journal of Research in Reading, 14*, 81–98.

Examines (1) the relations among children's recall of explicit, implicit, and metaphorical information following the silent reading of short stories, (2) the effect of grade level (second versus fifth) on recall, and (3) the effect of recall task (free recall versus cued recall). Forty second graders and 40 fifth graders were randomly assigned by gender and grade level to one of two groups: free recall and cued recall. Four short stories (81–106 words) were read silently by each subject in an individual session. Immediately following the reading, passage comprehension was assessed. Pupils in the cued recall group were given a set of 12 questions—four each geared toward explicit, implicit, and metaphorical information—for each story. Children in the free recall group were given no prompt questions. Transcriptions of each subject's oral recall were scored based on the number of correctly recalled propositions from the story and the proposition type (explicit, implicit, and metaphorical). A MANOVA indicated that fifth grade children's propositional recall was qualitatively and quantitatively superior to that of second graders, regardless of recall task. In addition, children in the cued recall group significantly outperformed pupils in the free recall group regardless of grade level. Further analyses revealed that the types of propositions recalled were similar for both grades.

SYMONS, SONYA, & PRESSLEY, MICHAEL. (1993, July/August/September). Prior knowledge affects text search success and extraction of information. *Reading Research Quarterly, 28*, 250–261.

Explores the impact of prior knowledge on college students' ability to locate information in textbooks. Three groups of students enrolled in an introductory psychology course were tested, 36 at the beginning of the fall term, 26 at the beginning of the spring term, and 27 after the course was over. Subjects used an introductory psychology text different from the one used in the course to locate answers to low-inference questions related to content covered in the course during the fall or spring terms. Subjects also were given a search task in a separate earth sciences textbook where they would have little prior knowledge for the task. Additional data were collected from the verbal section of the SAT-V and for fall and spring course grades. Extraction efficiency was greatest immediately after the term in which the material had been taught. No group differences were found in the search of the earth science textbook, suggesting that improvement in search of the psychology text did not transfer to general search competence. Prior knowledge effects appeared to be due to recognition of correct answers when they were encountered.

ALLBRITTON, DAVID W., & GERRIG, RICHARD J. (1991, October). Participatory responses in text understanding. *Journal of Memory and Language, 30*, 603–626.

Demonstrates, in three experiments, that readers' preferences about how stories will turn out can interfere with prior knowledge of the stories' actual outcomes. Twenty undergraduates participated in each experiment. Subjects were presented with short stories on a computer monitor, one sentence at a time. The initial sentence of each story revealed its actual outcome. One or two sentences in the middle of the story manipulated the reader's preference so that it differed from the actual outcome. After reading the stories, subjects made true or false verification judgments about the outcomes of each story, with the reaction time for each judgment being recorded. In Experiment 1, verification judgments were made 5 minutes after all the stories were read. In Experiment 2, verification judgments were made immediately after reading each story. In Experiment 3, verification judgments did not refer to the outcomes but to other aspects of the story. ANOVA procedures applied to the data for Experiments 1 and 2 revealed that when preferences for negative outcomes had been induced, readers were generally slower in verifying the actual outcomes of the stories, with the effect being greater when the actual outcomes were positive rather than negative. Results of Experiment 3 showed that preferences for negative outcomes did not produce longer verification latencies for information that did not allude to story outcomes.

MANY, JOYCE E. (1990). The effect of reader stance on students' personal understanding of literature. In Jerry Zutell & Sandra McCormick (Eds.), *Literacy theory and research: An analysis from multiple paradigms*, (pp. 51–63). Chicago, IL: National Reading Conference.

Describes the stances taken in eighth graders' responses to literature and the relation of these stances to the level of understanding and its consistency across texts. Fifty-one children in Grade 8 were randomly selected from two schools representing a range in SES. Pupils read three selected short stories and responded to a reader response prompt in writing. Reader responses were rated on a 5-point continuum from aesthetic stance to efferent stance. The level of personal understanding was rated by the degree to which the response tied to story events and the level of abstract generalization formed. Findings indicate that responses written from the aesthetic stance were associated with significantly higher levels of understanding. These results were significant across various story selections.

O'BRIEN, EDWARD J., & ALBRECHT, JASON E. (1992, July). Comprehension strategies in the development of a mental model. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 18*, 777–784.

Explores the assumption that mental models for narrative text compel readers to strategically adopt the protagonist's perspective. Three experiments, each utilizing 40 psychology students as subjects, tested the assumption. Experiments 1A and 1B required subjects to read passages in which a pivotal phrase violated information presented earlier about the protagonist's location. Experiment 2 required subjects to read passages that described a second character moving in a direction that was consistent or inconsistent with the protagonist's perspective. Experiment 3 expanded Experiment 2 by asking subjects to take on the protagonist's perspective. For each experiment the reading time for the pivotal phrase of each passage was recorded. Findings of Experiment 1A and 1B showed faster reading of pivotal phrases when the location information within them was consistent with the protagonist's original location. Findings of Experiments 2 and 3 cumulatively demonstrated subjects' failure to notice information that was inconsistent with the protagonist's perspective unless they were explicitly directed to take on that perspective. The authors conclude that readers focus on information that is relevant to the protagonist, but that they do not take on the protagonist's perspective unless textual characteristics compel them to do so.

YEKOVICH, FRANK R.; THOMPSON, MICHELE A.; & WALKER, CAROL H. (1991, Spring). Generation and verification of inferences by experts and trained nonexperts. *American Educational Research Journal, 28*, 189–209.

Compares the ability of trained, but not yet expert, credit administrators to generate and verify inferences with that of expert credit administrators on the same task. Subjects were 30 male bankers equally divided between the trained nonexpert (TNE) group and the expert group. Subjects read aloud a case study of a bank that had neglected to develop appropriate quality control measures in its credit administration area. Subjects, tested individually, were instructed to take the perspective of the credit administrator of the bank. Subjects' retellings of the case study and statement of concerns, from the perspective of the bank administrator, were recorded. Then, subjects were to determine whether each of 24 given statements was true based on the case study and, for each deemed correct, whether it was stated explicitly or implicitly in the case study. Subjects then read each of 14 additional statements and determined whether it represented a problem facing the bank. Analyses of recall data indicate that while experts and TNEs recalled approximately the same number of facts from the case study, the type of information recalled differed significantly between these groups, suggesting that only the experts were able to readily adopt the perspective required for the task. Experts generated a significantly greater number of inferences than did TNEs. Further, experts were significantly better able to tell whether a statement was true based on the text; however, there was no significant difference in ability to identify whether correct information was stated directly in the text or implied. Finally, there was no significant difference between experts and TNEs on the third problem identification task.

SPIRES, HILLER A.; GALLINI, JOAN; & RIGGSBEE, JAN. (1992, Summer). Effects of schema-based and text structure-based cues on expository prose comprehension in fourth graders. *Journal of Experimental Education, 60*, 307–320.

Explores the effects of previewing and structure cueing on 74 fourth graders' comprehension of expository prose. Subjects were randomly assigned to one of three conditions, two experimental or control. Subjects participated in a training activity, then silently read the passage, completed a multiple-choice test, and wrote a summary. Testing followed immediately after reading, as well as 3 weeks after the final session. Six 50-minute instructional and testing sessions were conducted over a 3-week period. Subjects in the previewing group focused on preview statements preceding targeted sections of text. Subjects in the structure cueing group received instruction focusing on problem-solution and comparison-contrast text patterns. Control subjects received no new instruction but were given more time for reading materials. Dependent measures included student prediction scores of how well they performed on the multiple-choice tests, scores on the initial and delayed multiple-choice tests, and scores on the student-generated summaries. Pupils in the previewing group scored significantly higher than pupils in the structure cueing or control groups on most summaries and on most multiple-choice measures. Pupils in the preview group were more likely to predict their test performance than were pupils in the other two groups.

Gallini, Joan K., & Spires, Hiller A. (1992, April–June). The influence of anaphoric relations and departures from story grammar structure on text processing. *Reading Psychology, 13*, 107–130.

Examines the reader's accuracy in predicting his or her performance under text conditions where the explicitness of anaphoric relations and story grammar structure vary. The sample consisted of 74 undergraduate students enrolled in an introductory psychology course. Subjects were assigned randomly to one of the two experimental conditions (low inference or high inference) varying in the explicitness of anaphoric relations and adherence to story grammar structure. Participants in both conditions read a passage consistent with story grammar rules and another passage departing from the typical narrative story schema. Analyses consisted of comparing the low- and high-inference groups on scores obtained for each passage. Also considered was the reader's ability to predict his or her comprehension of the content. Results revealed that text learning was more evident in the low-inference group for both passage types. This included recall of macro and micro idea units and comprehension performance. In addition, subjects in the low-inference group manifested greater accuracy in predicting their performance on both passages.

Foos, Paul W. (1992, October). Constructing schemata while reading simple stories. *The Journal of General Psychology, 119*, 419–425.

Explores whether the construction of schema while reading a story occurs at encoding (when reading the story) or at retrieval (when asked about the story). Subjects were 27 undergraduate university students. Each participant was timed while reading simple stories about ordered events and while responding to true-false questions about the order of the events in the stories. Three different sequences of events were used in the stories: a chronological sequence (1-2-3), and two different flashback sequences (1-3-2 and 2-1-3). In total, 18 experimental trials (six stories with three sequences each) were used. Analyses of story-reading and test-response times revealed that the sequence of events in the stories affected the amount of time the subjects took to read the stories but not the amount of time the subjects took to respond to the test questions. These results confirmed that the subjects constructed an ordered schema while they read the story, rather than while they took the test.

Zabrucky, Karen, & Ratner, Hilary Horn. (1992, September). Effects of passage type on comprehension monitoring and recall in good and poor readers. *Journal of Reading Behavior, 24*, 373–391.

Compares good and poor readers' comprehension monitoring and recall of narrative and expository passage information. Subjects were 32 sixth graders classified as good and poor readers on the basis of performance on the comprehension subtest of the SDRT. Subjects read narrative and expository passages, some of which contained inconsistent sentences. The passages, which were controlled for length, were presented on a computer monitor one sentence at a time as reading time for each sentence was recorded. Following the reading of each passage, children were asked to report verbally on any detected inconsistencies. Dependent measures included overall reading times, reading times for individual sentences, number of look-backs, number of recalled idea units, and number of correct verbal reports of detected inconsistencies. ANOVA procedures applied to the data revealed that poor readers generally read more slowly than good readers. While all subjects detected inconsistencies as they read, good readers were more proficient at verbally reporting problem information. Children were apt to look back at inconsistencies in narratives but not in expository material. They tended to only reread expository passages that did not contain inconsistencies. Good readers excelled poor readers on recall of idea units, although recall of expository passage information was inferior to recall of narrative passage information for both groups.

Carrell, Patricia L. (1992, March). Awareness of text structure: Effects on recall. *Language Learning, 42*, 1–20.

Studies the relation between learners' awareness of expository text structures and their recall of text written in those structures. Different measures of text structure awareness were also contrasted. Subjects were 45 high-intermediate proficiency ESL university students. Subjects produced written recalls of English prose presented in a comparison and contrast and a collection of description structures. Their text awareness was then assessed through (1) a measure of organization used in producing the written recall and (2) a questionnaire probing recognition of organization in materials that were read. A variety of qualitative and quantitative techniques were employed to analyze various sets of data. Findings showed that regardless of measurement techniques utilized, the different text structures yielded no differences in levels of awareness, as well as no differences in quantity of information recalled. The different text structures did produce variations in quality of information recalled. Subjects who used the structures of the original passages to organize their written recalls exhibited superior quality and quantity of recall.

Ferreira, Fernanda, & Henderson, John M. (1991, December). Recovery from misanalyses of garden-path sentences. *Journal of Memory and Language, 30*, 725–745.

Investigates, in five experiments, sentence characteristics that promote misunderstanding while reading. Subjects for all experiments were Canadian undergraduates who were paid for their participation. Stimuli for all experiments were two clause sentences, containing an ambiguous noun phrase that could operate as either the direct object of the verb in the first clause or the subject of the verb in the second clause (garden-path sentences). Sentences for each experiment were presented on a computer monitor in a paced, segment-by-segment reading task with a cumulative display. Correct judgment on the grammaticality of each sentence presented was the dependent variable. Experiments 1 and 2 utilized 18 subjects and probed the effect of ambiguous phrase length on ease of reanalysis. Results indicated that garden-path sentences with longer noun phrases were significantly more difficult to resolve. Experiment 3 utilized 24 subjects and demonstrated that the difficulty of longer ambiguous phrases did not stem from greater syntactic complexity. Experiments 4 and 5 utilized 18 and 36 subjects, respectively. Both demonstrated that increasing the distance from the head of the ambiguous region to the disambiguating word affects the difficulty of reanalysis. Ambiguous phrases lengthened by addition of prenominal adjectives were analyzed more easily than those lengthened by addition of postnominal modifying prepositional phrases or relative clauses.

Wilkinson, Phyllis A., & Patty, Del. (1993, February). The effects of sentence combining on the reading comprehension of fourth grade students. *Research in the Teaching of English, 27*, 104–125.

Attempts to identify effects of sentence combining (SC) practice upon reading comprehension. In addition, the researchers were interested in SC practice as a process that develops an awareness of syntax and structure, as well as intrasentential and intersentential cohesion. Two heterogeneous fourth grade classes served as the experimental ($\underline{n} = 33$) and control ($\underline{n} = 32$) groups. Pupils in the experimental group devised narratives from sets of cued and uncued kernel sentences, while the control group read compiled narratives developed by the experimental group and then completed crossword puzzles as a "placebo" treatment. A MANOVA design, with IQ covaried, tested for interaction of gender and group together and for main effects of SC practice upon reading comprehension, as measured by a standardized test and two cloze tests. One of the cloze tests was developed to delete structure and function words; another was constructed with content word deletions. The study found statistically significant results for the experimental group on the SRT. Differences in performance on the cloze test with structure and function word deletions approached significance for the experimental group, but performance on the cloze test which deleted content words (lexical deletions) was not significant. Results indicated that SC practice may have enhanced cohesion knowledge and general comprehension.

van der Meij, Hans. (1993, February). What's the title? A case study of questioning in reading. *Journal of Research in Reading, 16*, 46–56.

Describes what a class of fourth to sixth grade children decide to ask about texts, the origin of their questions, and their purposes for asking questions about text. One class of 30 children, ranging in ages from 9 to 13 years, were observed over several months as they, in pairs, took responsibility for selecting a text to be read aloud to their peers and for framing questions to accompany the text. Questioning procedures were then observed both as the children prepared to lead discussions and during discussions. Data sources included classroom observations, teacher and pupil interviews, and tape recordings of the question-answer interactions. Strategies children employed for developing questions included activating a repertoire of generic questions or searching for sentences in their texts that could be turned into questions. During discussion, most of the questions were text-based, explicit, and micro-structural. Children used questions largely to control the group interactions. The researcher recommends explicit instruction in question generation.

Cunningham, James W., & Moore, David W. (1993, June) The contribution of understanding academic vocabulary to answering comprehension questions. *Journal of Reading Behavior, 25*, 171–180.

Explores the influence of the vocabulary of comprehension questions on pupils' reading comprehension performance. Subjects were fourth-, fifth-, and sixth-grade children from one midwestern U.S. elementary school, all of average reading ability as determined by the ITBS. Two sets of comprehension questions, one containing academic vocabulary and one containing everyday vocabulary, were developed to accompany literary narrative passages. Test forms were created where both types of questions were interspersed throughout the text. Subjects read without look-backs and answered the questions. In addition, subjects completed an informal measure of academic vocabulary. Each subject answered a total of 10 everyday vocabulary and 10 academic vocabulary questions across two passages. Subjects had significantly lower comprehension scores on questions with academic vocabulary. A series of simple, multiple, and semipartial coefficients of correlation suggested that differences in terminology accounted for the difference in question-answering performance.

Dreher, Mariam Jean. (1992). Predicting the location of answers to textbook search tasks. In Charles K. Kinzer & Donald J. Le u (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 269–274). Chicago, IL: National Reading Conference.

Explores whether students realize if they are incorrect when they are asked to predict the location of answers to textbook questions. Thirty-four undergraduates participated in the study. All subjects were near completion of the teacher education program. Using the index and table of contents of an unfamiliar introductory psychology textbook, students were presented with six questions and asked to predict in which chapter the answer to each question would be found. Half of the questions contained immediately searchable index terms, while the other half required students to infer a searchable term. After each task (question-answer search) students rated their confidence in their answers on a 7-point scale. Results suggested that successful category selection is predicted by psychology knowledge when no immediately searchable term is present, but category selection is predicted by general academic skill when the task contains searchable index terms. Subjects appeared to realize when they are wrong, particularly for questions with searchable terms. Subjects were more successful at predicting the location of answers to questions when the terms were explicit versus inferred.

Carlson, Richard A.; Lundy, David H.; & Yaure, Robin G. (1992, Spring). Syllogistic inference chains in meaningful text. *American Journal of Psychology, 105*, 75–99.

Conducts four experiments to examine the processes evoked by syllogistic arguments encountered in reading meaningful text. Subjects were university students enrolled in introductory psychology classes (n = 96 for Experiments 1 and 2, n = 32 for Experiment 3, and n = 88 for Experiment 4). Subjects read meaningful texts that included syllogistic inference chains, then answered questions requiring memory retrieval or deductive inference. The order in which premises appeared in the passages varied, as did the presence of prequestions corresponding to the memory or inference test questions. Experiments 1 and 2 replicated previous findings concerning premise order and demonstrated that reasoning processes were changed as predicted by prequestions that provide deductive goals. In Experiment 3, manipulating the number of premises required for answering inference questions supported a stepwise view of reasoning. Experiment 4 examined the generality of these findings by using the same manipulations with different presentation and response modes. Results demonstrated that inference prequestions do affect reasoning outcomes under some circumstances. These include occasions when subjects must reason on-line because they cannot look back to refresh working memory and when the reasoning task can be accomplished by the straightforward application of forward inference rules.

Gallini, Joan K.; Spires, Hiller A.; Terry, Suzanne; & Gleaton, Jim. (1993, Spring). The influence of macro and micro-level cognitive strategies training on text learning. *Journal of research and development in education, 26*, 164–178.

Assesses the differential benefits of macro- and microprocessing strategy instruction on remedial high school students' text learning abilities. Participants were 66 high school students classified into low, medium, and high reading ability groups primarily in accordance with their CTBS performance scores. Students within each ability group were then randomly assigned to one of three treatment groups: macroprocessing, microprocessing, or control. Treatment was implemented twice weekly over 6 weeks, with each session lasting approximately 50 minutes. Macroprocessing instruction showed students how to organize passage content into hierarchical schemas. Microprocessing instruction showed them how to use anaphora and connectives for the purpose of establishing within sentence cohesion; controls were instructed with a traditional skill-based approach to reading. A variety of measures based on eight passages, each ranging between 340 and 410 words, were used to determine text comprehension and learning. Quantitative comparisons of treatment effects on multiple-choice and completion tests for each passage revealed the superiority of the macroprocessing group over other groups. Qualitative and quantitative analyses of written summaries also revealed a more frequent use of top level structure in summaries written by the macroprocessing strategy group.

Williams, Joanna P. (1991, Winter). Comprehension by learning-disabled and nondisabled adolescents of personal/social problems presented in text. *American Journal of Psychology, 104*, 563–586.

Examines LD and nondisabled (ND) students' reading comprehension of two variations of problem text representation as affected by prior knowledge. Subjects were forty-eight 14-year-olds drawn from three schools. Subjects were assigned to one of four groups depending on SES (upper-middle or lower-middle) and learning ability (LD or ND). Subjects in the four groups were matched in gender distribution and mean age, but each group contained a variation in reading levels, with students in LD groups performing significantly below their expected levels of achievement. Subjects read problem narrative texts in either of two versions: no-priority or priority. Both versions presented the character's goal with obstacles that made goal attainment difficult and two choices of action. The priority version additionally provided a statement of the character's preference in choices of action. Four measures of problem representation recall were obtained from the subjects, regardless of the version they read: (1) number of idea units accurately recalled, (2) number of idea units inaccurately recalled, (3) number of important problem schema components recalled, and (4) number of ideas imported from sources other than the text. A variety of analyses applied to the data revealed that patterns of reporting problem schema components differed depending on whether or not text presentations included preference for action statements, with all readers showing a sensitivity to this aspect of text structure. Reading ability influenced error rate as well as number of idea units and problem schema components recalled, but not degree to which extratext information was incorporated in the text. LD students made more extratext importations and more implausible importations than ND students. Awareness of the source of information on which predictions are based (text or extratext) was displayed only by the most proficient readers.

Meloth, Michael S., & Deering, Paul D. (1992, April). Effects of two cooperative conditions on peer-group discussions, reading comprehension, and metacognition. *Contemporary Educational Psychology, 17*, 175–193.

Investigates task-related talk, reading comprehension, and metacognitive behaviors of third graders learning in two cooperative conditions. Participants were 219 children in eight classrooms in two suburban districts. Prior to initiating treatment, children were pretested on four reading comprehension skills (prediction, inference, main idea, and summarization), and on four metacognitive skills (evaluation, planning, regulation, and conditional knowledge). Baseline data were also acquired on group discussion performance as children worked in small groups. During the treatment phase, pupils were randomly assigned to one of two cooperative conditions. The reward condition encouraged cooperation by providing team recognition for individual performance on weekly quizzes. The strategy condition encouraged discussion focussed on content. The treatment phase lasted 4 weeks, during which groups in each condition took part in cooperative activities lasting 30–50 minutes for a minimum of 4 days per week. On the Friday of each week, the discussions of the same two randomly selected groups in each classroom were recorded. Each child in the reward condition was also given a quiz on topics covered during the week. At the completion of the treatment phase, reading comprehension and metacognitive skills were reassessed. The strategy condition groups performed significantly better in all comprehension skill areas and on the metacognitive skill of conditional knowledge than did the reward groups. Analysis of transcripts of recordings showed that while the general structure of task-talk remained essentially unchanged during treatment, discussions in the strategy condition were more focussed on concepts and strategies associated with cooperative tasks than they were on facts. Conversely, groups in the reward condition engaged in off-task talk to a significantly greater degree than did groups in the strategy condition.

Forlizzi, Lori A. (1993, February). Exploring the comprehension skills and strategies of ABE students. *Mosaic, 3*, 1, 6.

Reports on a study examining the comprehension skills and strategies of Adult Basic Education (ABE) students. Subjects were 47 students from two ABE programs in central Pennsylvania. All subjects had scored between 5th and 10th grade level on the comprehension portion of the Tests of Adult Basic Education. Subjects were interviewed on their familiarity with several comprehension strategies. They were also administered an oral reading test to assess their use of comprehension strategies and other aspects of reading behavior. Subjects' responses to the interviews indicated that many of them realized the importance of reading comprehension, were cognizant of variables that impact comprehension, and utilized appropriate repair strategies when comprehension failed them. Results of the oral reading assessment also demonstrated that approximately half of the participants noted inconsistencies during their reading, although a significantly smaller number failed to note more subtle contradictions. Repair and look-back strategies were applied by a large portion of the subjects who noted inconsistencies or contradictions.

DREYER, LOIS G., & KATZ, LEONARD. (1992). An examination of "the simple view of reading." In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 169–175). Chicago, IL: National Reading Conference.

Examines how well the Simple View model predicts reading comprehension for a student population that is substantially different from the Spanish-English bilingual population. Subjects were 121 monolingual English-speaking third graders from four elementary schools. During third grade, children were given a 60-item test of decoding ability and the school's annual achievement battery which elicited listening and reading comprehension subscores. Two years later, reading comprehension scores were obtained from school records. Pearson product moment correlation coefficients for all measures indicated that decoding and listening comprehension were highly related to reading comprehension at both the third and fifth grade levels. Whether configured as a sum or product, findings from the hierarchical multiple regression indicated that decoding and listening comprehension were essential factors in reading comprehension. Results supported the general theory underlying the Simple View of Reading and confirmed the importance of word recognition skills in reading.

PERKINS, KYLE, & BRUTTEN, SHEILA R. (1992, September). The effect of processing depth on ESL reading comprehension. *Journal of Research in Reading, 15*, 67–81.

Reports the results of a study investigating the effect of processing depth on ESL reading comprehension, specifically on responses to factual, generalization, and inference reading tasks. Subjects were 159 Japanese students enrolled in intensive English classes. All had studied English for 6 years. Subjects completed a 50-item multiple-choice reading comprehension test constructed for the study with 15 factual items, 20 generalizations, and 15 inference items. Significant differences were found in mean correct percentages between factual and generalization items, factual and inference items, and generalization and inference items. Mean scores were higher for inference questions than for generalization questions. Lack of training in generalizations is offered as a possible explanation for the difference in scores.

RAUENBUSCH, FRANCES, & BEREITER, CARL. (1991, July). Making reading more difficult: A degraded text microworld for teaching reading comprehension strategies. *Cognition and Instruction, 8*, 181–206.

Explores, within three studies, the use of degraded text for teaching reading comprehension strategies. Specifically, the studies seek to compare strategies used to read degraded text with those used in reading normal text; the effectiveness of degraded text as a vehicle for teaching various reading strategies; and the transferability of various strategies learned with degraded text to normal text. In the first study, 17 gifted seventh graders were asked to read text that had been degraded by deleting every third letter and replacing it with an underline. All subjects were encouraged to use a think-aloud procedure in which they had received training. Five subjects received no prereading suggestions, four were encouraged to skim the text prior to reading it, and eight were required to skim the text and report what they had learned prior to the reading. An analysis of the think-aloud data indicated that children who had been required to skim and report used four strategies relevant to obtaining meaning significantly more often. Students who were left to their own resources or who ignored directions to skim tended to focus on the graphic features of the text. In the second study, 13 seventh graders with average to above average reading comprehension skills worked with the same degraded materials utilized in the first study. However, as opposed to subjects assigned to the control group, those in the training group were taught the four comprehension strategies through explanation and modeling. Results showed that training was effective in teaching seventh graders to utilize the four comprehension strategies; that the training group was more successful than the control group in accurately filling in letters missing in degraded text; and that degraded texts were educationally suitable as instructional materials. In the third study, 77 average to above average seventh graders were randomly assigned to a training group, an undirected practice group, or a control group. Both the training and undirected groups worked with degraded text for six 40-minute sessions; the training group additionally received comprehension strategy instruction. The training group (1) excelled over other groups on various comprehension posttests given, (2) demonstrated significantly more proficiency in comprehension strategy utilization than other groups, and (3) exhibited higher transfer capabilities to regular text than did other groups.

IV-22 Research design

GOETZ, ERNEST T.; SADOSKI, MARK; OLIVAREZ, ARTURO, JR.; CALERO-BRECKHEIMER, AYXA; GARNER, PAMELA; & FATEMI, ZHALEH. (1992). The structure of emotional response in reading a literacy text: Quantitative and qualitative analyses. *Reading Research Quarterly, 27,* 360–372.

Examines the utility of using categorization methodology to describe the underlying structure of the affective terms in the free reports of emotional responses of readers to literary text. Also determines if the category structure of latent partition analysis of affect terms is replicable across samples of sorters and whether that sorting is influenced by reading the story prior to sorting. In the first experiment, 53 undergraduates who had not read the story sorted 69 affect terms reported by students who had previously read the story. Cards were to be sorted in piles of terms that were similar in meaning. Sixty-five of 69 terms were uniquely assigned to a single category. Categorization methodology seemed to provide a taxonomy of affect terms that revealed a complex underlying structure for readers' emotional reactions. In the second experiment, 78 undergraduates sorted the terms to determine whether the categories from the first experiment would replicate across groups of sorters. Sort-only subjects sorted terms as in the first. Read-and-sort subjects read the story prior to sorting. Sort-only subjects sorted terms in a very similar manner to the sortings of the first experiment. Read-and-sort subjects sorted in a similar manner to those who had not read the story.

V. The teaching of reading

V-1 Comparative studies

HLADCZUK, JOHN, & ELLER, WILLIAM (Eds.). (1992). *International handbook of reading education*. Westport, CT: Greenwood.

Surveys reading education worldwide. Case studies of 26 countries are represented with a chapter on each by, in most cases, a scholar indigenous to that country. Each chapter deals with whether there is a reading problem in a country and, if so, what should be done about it. Common themes of reading policy, language issues, the instructional process, goals of reading, teacher education, adult literacy, assessment of achievement, and reading research are addressed in the chapters.

LUNDBERG, INGVAR, & LINNAKYLA, PIRJO. (1993). *Teaching reading around the world*. The Hague, The Netherlands: International Association for the Evaluation of Educational Achievement.

Reports data from an assessment of reading literacy conducted in 32 countries. The study was conducted in 1990 and 1991 and involved 10,500 teachers and about 200,000 9- and 14-year-old children. The phase of the study discussed in this volume focuses on how reading is taught. Similarities and differences in teacher characteristics and in the nature of teaching reading in various countries are described. Data are based on results of a questionnaire consisting of 46 main questions, several with subquestions. Four variables were included in the questionnaire: (1) teaching conditions, (2) teacher characteristics, (3) instructional strategies, and (4) assessment. Additional data were collected from principals and children. Reading achievement information was collected on narrative prose, expository prose, and documents. Average class size for 9-year-olds ranged from 16 in Italy to 38 in Singapore; for 14-year-olds, the range was from 16 in Switzerland to 47 in the Philippines. At the 9-year-old level, more time was spent on reading and language instruction in Canada, the United States, and New Zealand than in most other countries. Teachers' reading habits were assessed in three areas: professional reading, expository reading, and literature reading. No relation was found between teacher reading and student achievement or teacher education. Significant coefficients were found in some countries between teacher reading and instructional practices, although the coefficients seldom exceeded .35. In most countries, for example, teachers who reported frequent reading also tended to have discussions of books with students, to prepare their own instructional materials, and to focus more on children's interests. Coefficients of correlation between teacher reading and student voluntary reading tended to be small and statistically insignificant. There was considerable conformity across countries in teachers' perceptions of the aims of reading instruction. Some form of grouping was found to be a common practice in almost all countries, with ability grouping appearing as the most common type. Readers are referred to the full report for additional findings.

PURVES, ALAN. (1993, April). Studies shed light on performance of U.S. teachers, students. *Council Chronicle*, 2, 19.

Summarizes findings from studies conducted under the auspices of the International Association for the Evaluation of Educational Achievement to demonstrate relative performance of U.S. teachers and students in various aspects of literacy and literacy learning. White middle-class U.S. students performed as well on reading and writing measures as did their counterparts in other countries, but they were less adept at reading documents than at reading narrative and expository text and less adept at writing argument and reflective prose than at writing narrative. Girls appeared to do better in language arts than did boys, but the gap in the United States was not as great as in some European countries. Gender differences tend to be confounded with social-class issues. American teachers' eclectic teaching practices seem to match the eclecticism of teachers in most other countries. Areas suggested for further study include the effects of television on reading performance and the attention given to content and style in teaching and marking writing.

SHERIDAN, E. MARCIA. (1993). Reading disabilities: Are there fewer in Japan? *Reading Horizons*, *33*, 245–257.

Reviews literature related to reading achievement in Japan. The author found that most studies suggest that Japanese children begin reading prior to first grade. According to some studies, this may be due to the fact that Japanese is a syllabary rather than an alphabetic language. Most studies reveal a very low incidence of reading disability among Japanese children. However, a recent study revealed that 11% of the subjects had a reading disability, that twice as many males were affected as females, and that the disabilities appeared to be strongly associated with cognitive rather than perceptual factors. The author concludes with a discussion of differences that make crosscultural comparisons difficult.

V-2 Status of reading instruction

RAVITCH, DIANE, & FINN, CHESTER E., JR. (1987). *What do our 17-year-olds know?* New York: Harper & Row.

Contains the findings of the first U.S. national assessment of 17-year-old students' knowledge of history and literature. Approximately 8,000 third-year high school students were included in the sampling. Both teachers and students were asked to fill out background questionnaires. The tests consisted of 141 history questions and 121 literature questions divided among four test books, each of which was given to an independent sample. Content in the literature test included (1) novels, short stories, and plays (50%); (2) myths, epics, biblical characters, and stories (30%); (3) poetry (10%); and (4) nonfiction (10%). The average score on the test was 51.8%. In responses to questionnaires, about one-third of the students indicated spending 2 or more hours each day on homework; another third indicated spending an hour a day; and the final third indicated spending little or no time on homework. Students who spent no time on homework tended to have lower scores on the tests than did students who spent some time with homework. Almost half of the sample watched television for 2 hours or less each day; 44% watched 3–5 hours daily; and 9% watched 6 or more hours each day. Girls read more on their own than did boys, with 37% of girls indicating that they had read 10 or more works during the previous 6 months compared with 26% of boys. About 17% of the sample indicated that they never read on their own. Some 60% stated that they had read a novel for pleasure during the previous 6 months; 45% stated that they had read no poetry on their own in the previous 6 months. Students with the highest scores on the assessment instruments tended to read daily.

FOERTSCH, MARY A. (1992). *Reading in and out of school: Factors influencing the literacy achievement of American students in grades 4, 8, and 12 in 1988 and 1990.* Washington, DC: National Center for Education Statistics.

Reports on the reading assessment from the National Assessment of Educational Progress (NAEP) conducted in 1990 with 4th, 8th, and 12th graders in the United States. In addition, data common with the 1988 NAEP assessment are used for comparison purposes. Results are based on a nationally representative sample of about 13,000 students in 1988 and 25,000 students in 1990. Both public and private schools were included. In particular, this report focuses on the relations between reading achievement and various background factors such as instructional approaches, reading experiences, home influences, and demographic characteristics. Included among the findings are that students who reported reading more pages each day for school and homework had higher reading achievement scores, but 45% of students at Grade 4, 63% at Grade 8, and 59% at Grade 12 reported reading 10 or fewer pages a day. Students who reported more home support for literacy had higher average reading scores, but approximately 5% indicated that they did not have 25 books in their home, and about 15–25% reported that they did not get magazines or a newspaper regularly at home and had no encyclopedia. Fewer than half of the students reported that adults in their home read a lot. In addition, 44% of 4th graders and about 25% of 8th and 12th graders reported that workbooks were used daily in their classrooms. Frequency of library use tended to decrease with grade level. Some 66% of 4th graders reported using the library at least weekly, while the same was true for 25% at 8th grade and 10% at 12th grade.

MCGEE, LEA M. (1992, November). Focus on Research: Exploring the literature-based reading revolution. *Language Arts, 69*, 529–537.

Reviews research to illustrate changes in instructional practices and organization patterns brought about by literature-based reading instruction and looks at studies of teachers who are implementing features of literature-based programs. Drawing from reader response theory, the reviewer identifies innovative approaches and promising practices—including grand conversations and literature logs—that indicate elementary children's responses to literature can reach higher and more abstract levels. The reviewer also describes a group of studies that examine the ways literature is experienced in classrooms and compares efferent and aesthetic teaching activities in an effort to determine which of these teachers are using. Innovative organization schemes identified include use of core books, literature units, self-selection and self-pacing, cooperative learning groups, and text sets. Finally, the review addresses teachers' concerns as they implement literature-based programs and the challenges to the profession to undertake research that will inform new understandings of literature, reading, and children.

CODY, CAROLINE B. (1992–1993, Winter). Five years later: A survey of state textbook reform. *Publishing Research Quarterly, 8*, 52–61.

Summarizes findings from a survey conducted to follow up a 1985 initiative on textbook reform to determine if changes were made in response to the challenges issued to U.S. state policymakers in the document *A Policymaker's Guide to Textbook Selection*. States responding to the survey indicated changes implemented between 1985 and 1990. Follow-up phone interviews were held with respondents who indicated that their states had made changes in textbook-selection practices. Several states had upgraded quality in textbooks and provided better guidelines for textbook selection. The selection process in many adoption states had become more substantive, moving beyond a ranked link of approved books. New standards had been added to deal with issues of social and political concerns. States appeared to be moving to strengthen the role of teachers in the adoption process. Alignment of books with state and local curricula appeared to be a major concern. While no state had abandoned the statewide adoption process, many reported that local discretion was increasing and there was some loosening of restrictions on how textbook funds could be spent.

MCLAY, BARBARA. (1993, March). Silent reading as a method of improving reading comprehension. *Florida Reading Quarterly, 29*, 35–38.

Presents a review of research exploring the use of sustained silent reading (SSR) in the classroom as a method of increasing growth in reading comprehension. Notes that the research is limited and points out the need for further examination of the relation between time spent in SSR, and reading achievement and attitude toward reading.

SULLIVAN, EMILIE P.; CRONAN, THERESA; & RIGGS, SUSAN. (1992). Promoting readership within public schools: A survey of administrators and recommendations for practice. In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 77–84). Athens, GA: American Reading Forum.

Presents the findings from a statewide survey of public school administrators in Arkansas regarding reading practices in their schools. A questionnaire on practices for promoting lifelong reading was distributed to 694 secondary and 816 elementary school administrators. A total of 128 responses representing 70 school districts were returned. Responses were tallied and converted to percentage of total responses by school category. Over all, reading aloud, open access to the library, and using newspapers were reported by over half of all respondents. Involvement of parents was frequently reported at the elementary grades (71%) but tapered off at the junior (31%) and senior (8%) high levels. Development of a print-rich environment was not reported as a widely used method at any level. Reading practices were classified and discussed in relation to student interactions with print, curricular decisions, print access, building teacher knowledge, and gimmicks.

V-3 Emergent literacy

MORROW, LESLEY MANDEL. (1991). Relationships among physical design of play centers, teachers' emphasis on literacy in play, and children's literacy behaviors during play. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 127–139). Chicago, IL: National Reading Conference.

Seeks to determine factors that encourage voluntary literacy during play. The sample consisted of 530 children from 35 kindergarten classrooms. Student teachers made observations of the types of literacy stimuli that might motivate children to engage in literacy activities and the number and types of literacy activities discussed, guided, or modeled by the teachers. Observations were made once a week for 8 weeks using two questionnaires; observations were also made of children playing during recess. Anecdotal records from research assistants and teacher interviews were collected. Results indicate classrooms were not designed to facilitate literacy behaviors since few literacy materials were readily available for children's use during play. Teachers did not seek to engage children in voluntary literacy activities during play but perceived play as a time for social and motor development. Modeling and facilitating literacy activities were not found to be extensive.

HURLEY, FRANCES K. (1992). Story reading in daycare: A help or a hindrance? In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 17–25). Provo, UT: College Reading Association.

Observes storybook interactions and other oral language activities in a daycare center. The center employed 3 caregivers and cared for 14 children ranging from 1.7 years to 5.6 years of age. Data presented were taken from 132 hours of observations of 30 storybook events over a 6-month period. Children were read to daily, and concepts about print were introduced incidentally. The vast majority of the interactions during storybook reading were caretaker initiated. Children participated in the reading by listening, looking at pictures, and responding to literal-level questions. Discussion of the findings compares the types of literacy-related interactions occurring in a setting concerned with management issues versus those characteristic of a home environment.

GULLO, DOMINIC F., & BURTON, CHRISTINE B. (1992, June). Age of entry, preschool experience, and sex as antecedents of academic readiness in kindergarten. *Early Childhood Research Quarterly*, *7*, 175–186.

Examines the effects of children's age of entry, number of years of preschool, and sex on academic readiness at the end of kindergarten. Subjects included 4,539 children, of whom 104 started public school at age 3 (K3), 1,234 at age 4 (K4), and 3,201 at age 5 (K5). None had attended preschool programs other than the public school. Ethnic representation in the school system was 55.3% black, 30.8% white, 8.8% Hispanic, 3.0% Asian, 1.2% Native American, and 3.0% other; 58% were from low-income families. At-risk status was determined upon children's entrance to the public school program with the Cooperative Preschool Inventory–Revised. In May of the K5 year, children's achievement was assessed using the MRT, Level II. Hierarchical regression analyses, controlling for risk status, revealed that the age of entry and number of years of preschool accounted for a significant amount of the variance, but sex did not. ANCOVA results indicated that children who entered the public school program at K3 or K4 scored significantly higher on the MRT than did children who entered at K5. Children who were youngest in their class did not score as high as their older peers in the K4 and K5 cohorts. No difference was noted on achievement scores between the oldest and youngest children in the K3 group.

NEUMAN, SUSAN B., & ROSKOS, KATHY. (1993, Spring). Access to print for children of poverty: Differential effects of adult mediation and literacy-enriched play settings on environmental and functional print tasks. *American Educational Research Journal*, *30*, 95–122.

Examines the effects of adult mediation and literacy-enriched play settings on environmental and functional print tasks for minority preschoolers reared in poverty. Subjects were 177 children (93 boys, 84 girls) with a mean age of 50.6 months. All attended classes in a U.S. metropolitan Head Start Center serving African American (98%) and Hispanic (2%) families. The eight participating classrooms were assigned to one of three conditions: (1) a literacy-enriched generic office-play setting with a parent-teacher encouraged to assist children actively in learning about literacy; (2) a literacy-enriched office play setting with an adult asked to monitor the children in their literacy play without direct intervention; and (3) a nonintervention group. Prior to, during, and following the 5-month intervention, the frequency of each child's handling, reading, and writing of environmental and functional print was assessed through direct observation. Videotaped samples of the office play setting, collected weekly throughout the study, examined children's uses of print and functional items and their interactions with peers and parent-teachers. Following the intervention, each child was administered environmental and functional print tasks. Frequencies for each type of literacy-related activity by group across three time periods were determined. Results indicated that although no differences were found for children's understanding of the functions of print items, parent-teachers' active engagement with children in the office play setting significantly influenced their ability to read environmental print and to label functional items.

THOMAS, KAREN F.; RINEHART, STEVEN D.; & WAMPLER, SHERRIE K. (1992). Oral language, literacy and schooling: Kindergarten years. *Reading Horizons*, *33*, 149–166.

Reports findings from the second year of a 3-year study that followed four children from a prekindergarten Head Start program through first grade. After a year in the same Head Start program, the four children were enrolled in three different kindergartens. The aim of this phase of the study was to investigate the impact of kindergarten instruction on the development of language and literacy in the subjects. The researchers were interested in the influence of instruction on oral language functions, how oral language supports literacy in kindergarten, and in the subjects' changing views of literacy. Data were gathered 2–3 days a week during the last 3 months of school. Data sources included tapes and tallies of children's oral language functions in the classroom, results of two print awareness measures, performance on the Concepts about Print Test, and writing samples. Over all, there was a decrease in child-initiated talk from the first to the second year, as well as a decrease in some specific functions of language, including imaginative, interactional, and heuristic functions. None of the three kindergartens provided time for children to explore print or compose stories. Children's identification of print concepts ranged from 10 to 13 (of 19). Only one child could read decontextualized print from logos. Two children identified letters as "for reading"; the remaining two children had no consistent set of rules for what could be read. Children's identification of readable text represented little change from the previous year. Researchers noted differences between the instructional practices of Head Start and the three kindergartens.

Hildebrand V.L., & Bader, L.A. (1992, Fall). An exploratory study of parents' involvement in their child's emerging literacy skills. *Reading Improvement*, *29*, 163–170.

Attempts to define a developmental baseline for emergent literacy skills. The study also explores the relation between parental contribution to home literacy and emerging literacy development. Subjects were 74 prekindergartners ranging between 3 and 5-6 years of age. Subjects were individually administered the Bader Reading and Language Inventory and classified as high or low on three emerging literacy skills: (1) writing letters of the alphabet, (2) writing their names, and (3) requesting parental assistance in reading signs. Parents were surveyed on their contributions to their children's home literacy environment. Statistical comparisons made of children's scores on the three emergent literacy skills and their parents' survey responses indicated that children with higher ratings were more apt to have been provided with alphabet books; alphabet blocks, cards, and shapes; trips to the library; read-aloud stories; stories on tapes and records; and discussions of stories. Children with lower ratings were more apt to have been given gifts other than books and to have been allowed to view more TV without accompanying discussion.

Neuman, Susan B., & Roskos, Kathy. (1991, June). Peers as literacy informants: A description of young children's literacy conversations in play. *Early Childhood Research Quarterly*, *6*, 233-248.

Examines the nature of children's talk in a literacy-enriched preschool environment. Thirty-seven 4- and 5-year-olds from two urban preschool classes participated in the study. Each classroom was enriched with print materials and literacy tools; play spaces were reorganized to include literacy props. Prior to classroom enrichment, two measures of literacy behavior during play were obtained over a 2-week period. After a 4-week period designed to allow children to become familiar with the enriched classroom environment, the same measures were obtained. Data analysis included the identification of reading- or writing-like behaviors with a focus on literacy conversations. Results are discussed in terms of three types of literacy discourse within the context of play: (1) conversations focusing on naming literacy-based objects, (2) negotiating meaning related to a literacy topic, and (3) coaching between children in a literacy task. The authors conclude that children's collaborative engagement in literacy through play may serve a scaffolding role in their literacy development.

HANNON, PETER; WEINBERGER JO; & NUTBROWN, CATHY. (1991, June). A study of work with parents to promote early literacy development. *Research Papers in Education, 6*, 77-97.

Notes the effects of home-based and school-based interventions involving parents on the literacy development of preschool-age children. Participants included 20 children from 14 families in the Sheffield Early Literacy Development Project in Great Britain. The families involved were in the mid- to low-income range and included four headed by single parents. Fourteen of the children ranged in age from 2-5 to 2-10 years old, with 4 having a younger sibling and 2 having an older sibling. Some 100 books for children and parents were available for use. A series of 6 home visits were made at 2-week intervals during which literacy activities since a previous visit were reviewed with the parent, a new activity was introduced, and a plan of what could be done next was agreed upon. A series of five group meetings were held in which parents shared experiences, handouts were given, books and other materials were made available, and additional suggestions for activities were discussed. Data collected included pre- and postprogram interviews, records of books borrowed, samples of children's work, and notes taken after each home visit and at the group meetings. Both home-based and school-based procedures had an impact on children's literacy learning, but the home-based experiences appeared superior in promoting book sharing. Some parents provided more of a model by writing in front of children and using the library, and some began to recognize the importance of children taking over more of the handling of books, turning the pages, and talking about pictures. An impact on family literacy was also noted in that parents began to use the public library themselves. A positive effect was also seen on school-age siblings.

WILSON, REBECCA. (1993, Spring). Using LEA with my ESL daughter—a case study. *Indiana Reading Quarterly, 25*, 35–40.

Discusses the growth of one child's sight vocabulary as she practiced reading her dictated stories in language experience approach. Six stories were dictated, and the girl's reading vocabulary grew from nonexistent to 103 words.

V-4 Teaching reading—primary grades

MORROW, LESLEY MANDEL, & SHARKEY, EVELYN A. (1993, October). Motivating independent reading and writing in the primary grades through social cooperative literacy experiences. *The Reading Teacher, 47*, 162–165.

Reports a literature-based reading program used successfully with young children. The program included the use of classroom literacy centers, pleasurable teacher-guided literature activities, and reading and writing periods during which children could work independently or cooperate socially over texts. Ninety-eight predominantly minority children from five 2nd grades participated. Behaviors were transcribed and analyzed to determine the outcomes during reading and writing periods. Group formations, rules and leadership roles, collaboration, peer tutoring, and conflict situations are described, as are behaviors of children with special learning needs. The researchers conclude that independent reading and writing periods are valuable for motivation and to encourage participation.

GRIFFITH, PRISCILLA L.; KLESIUS, JANELL P.; & KROMREY, JEFFREY D. (1992, Spring–Summer). The effect of phonemic awareness on the literacy development of first grade children in a traditional or a whole language classroom. *Journal of Research in Childhood Education, 6*, 85–92.

Examines the relation between instructional approach and development of decoding skills, spelling skills, and writing fluency in children who enter first grade at varying levels of phonemic awareness. Children from two 1st grade classrooms in a rural school district in Florida served as subjects. Having been identified as high or low in phonemic awareness, children in one classroom received instruction through a whole language approach while children in the other classroom received traditional instruction through a basal reading program. Posttesting at the completion of the school year included a variety of formal and informal measures of phonemic awareness, decoding, spelling, reading comprehension, and writing fluency. Quantitative and descriptive analyses applied to the data revealed that beginning-of-the-year levels of phonemic awareness were more influential than instructional method on first graders' literacy acquisition. Children who initially scored high in phonemic awareness outperformed children who were initially low on all literacy measures administered. Findings also showed that while children in the whole language classroom did not receive a program of direct phonics instruction, they did appear able to decode words as well as did children in the basal reading classroom who did receive direct instruction in phonics.

MILLIGAN, JERRY L., & BERG, HERBERT. (1992, Fall). The effect of whole language on the comprehending ability of first grade children. *Reading Improvement, 29,* 146–154.

Examines the effect of a year of whole language instruction on the comprehending abilities of first grade children. Subjects were children in eight 1st grade classrooms of three elementary schools in a middle-income U.S. suburban school district. Four experimental and four control classrooms were formed at the beginning of the school year. Instruction of subjects in the experimental classrooms was based on whole language principles. The subjects in the control classrooms received instruction based mainly on the adopted basal series. At the end of the school year, all subjects were individually administered a cloze deletion test (CDT) designed to assess comprehension. The mean scores attained by the experimental and control subjects were compared as intact groups by three levels of ability, by sex, and by sex and ability levels. Of the 12 comparisons, 6 produced significant differences. Middle- and low-progressing experimental males and females and experimental males at each of the three ability levels attained significantly higher mean scores on the CDT than did their counterparts in the control groups.

DIXON-KRAUSS, LISBETH. (1992, Fall). Whole language: Bridging the gap from spontaneous to scientific concepts. *Journal of Reading Education, 18,* 16–26.

Investigates how children's literature can be used to bridge from children's spontaneous knowledge to the concepts of third grade social studies text and the effect of a transition to integrated instruction on children's social studies and reading progress. The study was conducted with 19 third grade children over a 6-week period as children's trade books were integrated into a U.S. history unit. Phase I, labeled "traditional instruction," included such social studies activities as brainstorming, previewing, directed reading of texts and related trade books, and completion of worksheets. Phase II, the whole language–literature-based instruction, involved constructing a time line for the second chapter of the social studies book, directed reading of four additional trade books, participating in a class minilesson, and reading self-selected trade books. Evaluation was based on an objective test that accompanied the social studies textbook following phases I and II. In addition, worksheets were scored and anecdotal teacher logs were converted to a graded scale. Reading and social studies scores were compared with the grades from the previous 6 weeks. Results showed a significant difference in pupil achievement for whole language over skills-based instruction on the social studies test, worksheets, and reading grades. Class mean scores in both social studies and reading were higher for the integrated whole language instruction than for skills-based instruction. Further, children identified as low achieving made greater mean increases in social studies and reading during whole language classroom instruction. The teachers recorded more engagement in silent reading during the whole language phase.

Berger, Melody. (1992, Summer). Whole language or basal-based phonetics... Which approach is better in first grade? *WSRA Journal*, *36*, 13–16.

Compares whole language with a basal-based approach to determine which is more effective for beginning reading and writing instruction. Two first grade teachers, one who leaned toward a whole language philosophy and one who espoused phonics instruction, were identified using the Theoretical Orientation to Reading Profile. Twelve children from each of their classrooms were then compared through writing samples over the course of first grade and in reading achievement at the end of the year. Monthly writing samples were evaluated for content, mechanics (excluding spelling), number of words used, total number of Dolch words used, total number of non–Dolch words used, and total number of two- and three-syllable words used. In addition, the number of books read outside school was monitored. There was no statistically significant difference between the groups at the start of the study, based on the Stanford Early School Achievement Test, Level 1. Although there was no statistically significant difference between groups on the standardized posttest (SAT), when the subjects' writing samples for the year were evaluated, statistically significant differences were found in favor of whole language for the variables of content and mechanics during each month of the school year except March and April. In addition, the whole language children used significantly more Dolch words, more non–Dolch words, and three-syllable words, and they read more books at home. No statistically significant results were found for total number of words written or total number of two-syllable words. The researcher noted that neither class could be considered a "pure" example of either philosophical approach in that each studied themes, had class libraries, emphasized writing, and used literature and basal readers.

Foley, Christy L., & Davidson, Shelly R. (1993, Spring). Supplementing kindergarten basal reading with language experience, echo reading and repeated reading. *Contemporary Issues in Reading*, *8*, 95–100.

Explores the effects of a supplemental reading treatment using holistic techniques on the learning and attitudes of kindergarten children receiving basal instruction. Subjects were children in two kindergartens, one treatment and one control. Both classes received the same basic instruction from a basal program, and both were instructed for equivalent amounts of time daily. The control group received only the basal approach, while the experimental group received the basal approach with repetitive activities replaced with language experience, echo reading, and repeated readings. Individual tutors were parents and fifth graders trained in the whole language reading treatment. They were reassigned pupils from the experimental group at random for each session, so that the children worked with a variety of tutors over the 2.5-month project. Dependent measures included assessment of letter knowledge, sight-word vocabulary, word-bank terms accumulated and recognized over time, and attitudes toward reading. Findings of the study favored the experimental group. Pupils in this group showed gains approximately twice those of the control group in letter recognition and in sight-word identification. The attitudes toward reading of all subjects in both conditions were positive; however, the experimental group subjects answered all items on the attitude measure more positively.

Cryan, John R.; Sheehan, Robert; Wiechel, Jane; & Bandy-Hedden, Irene G. (1992, June). Success outcomes of full-day kindergarten: More positive behavior and increased achievement in the years after. *Early Childhood Research Quarterly, 7*, 187–204.

Reports a longitudinal investigation of the effects of kindergarten schedule (half day, alternate day, and full day) and prior preschool attendance on elementary children's achievement, success, and classroom behavior, and on provision of special educational services. The study, conducted in Ohio, was done in two phases: a retrospective analysis of children who entered kindergarten in 27 school districts in the fall of 1982, 1983, and 1984; and a longitudinal study of children entering kindergarten in 120 classes in 27 school districts in the fall of 1986 (cohort 1) and the fall of 1987 (cohort 2). Data were collected on 8,290 pupils in the retrospective study on grade retention, provision of special educational services, provision of remedial educational services, and standardized test scores collected by school districts. For the ongoing longitudinal data, kindergarten MRT scores were available on 2,827 cohort 1 and 2,889 cohort 2 pupils and first grade MAT scores for 1,703 cohort 1 pupils. In addition, teacher ratings were collected on the Hahnemann Elementary School Behavior Rating Scale on a random sample of 527 cohort 1 kindergartners and 2,570 cohort 2 kindergartners. Results of the longitudinal research suggested that children who attend preschool prior to kindergarten experience greater subsequent success in elementary school than those who do not. Findings from both phases of the study indicated that participation in full-day kindergarten is positively related to subsequent school performance, at least through the first grade. Attending kindergarten as one of the youngest children in the class was seen to be related to increased school failure. Girls outperformed boys on standardized tests by 5 to 8 percentile points; 22% to 24% fewer girls than boys were in placed in Chapter 1 compensatory education classrooms, and 33% to 38% fewer girls than boys were retained. No gender differences were noted for provision of special educational services.

Hiebert, Elfrieda H.; Colt, Jacalyn M.; Catto, Sharon L.; & Gury, Ellen C. (1992, Fall). Reading and writing of first-grade students in a restructured Chapter 1 program. *American Educational Research Journal, 29*, 545–572.

Studies the efficacy of one model of Chapter 1 compensatory education instruction on first grade pupils' literacy acquisition. Subjects were first grade pupils drawn from two schools in one district who formed one treatment group and two comparison groups. The treatment group (n = 45) was identified using Chapter 1 placement criteria and was presented the restructured program by three trained Chapter 1 teachers. One comparison group (n = 34) consisted of pupils in the regular Chapter 1 program, and the second comparison group included all classmates of pupils in the restructured program. The restructured model was presented to groups of three pupils in half-hour sessions daily. Instruction involved three activities: (1) reading of predictable books, (2) writing rhyming words and journal entries, and (3) strategic guidance about patterns of words. Instruction in comparison groups reflected the district's whole language philosophy. The three groups were assessed on the same set of text- and word-level reading and writing measures in the final month of the year. Tasks included one informal reading inventory and three researcher-designed tasks: (1) graded word lists, (2) one writing text task, and (3) one writing word task. Chapter 1 pupils were also given the GMRT (Readiness Level) in the fall and the CTBS (Reading and Language Arts Tests) in the spring. Analyses revealed that (1) the majority of treatment pupils could read a primer or higher level text fluently; (2) pupils in the restructured Chapter 1 program had significantly higher performances than pupils in the district's regular Chapter 1 program; and (3) pupils in the restructured Chapter 1 who had begun first grade with significantly lower readiness scores than all of their classmates were performing at a level comparable to children in the middle of the class.

McIntyre, Ellen. (1992). Instruction meets learner: Success of an inner-city learner in a traditional first grade classroom. *Reading Horizons, 33*, 3–18.

Presents the case study of a successful first grader in an urban U.S. school with traditional instruction. The subject was a white female learner of Appalachian descent who was observed for 2 years (from the beginning of her kindergarten year through the end of her first grade year) both at school and at home. Her school was located in the inner-city region of a midsized, midwestern city. Data collected included prestudy assessments of literacy, observations of school behavior, recordings of verbal responses to instruction, interviews with her teacher and parents, and observations of her home environment. Assessments of literacy included six informal written language tasks to determine knowledge of print. Field notes were examined to determine patterns of instruction, the subject's interaction with print, and her reading strategies. To analyze both instruction and responses, qualitative analysis procedures were used. Findings revealed the following: (1) although she did not have extensive experiences with print prior to school, the subject entered first grade knowing what she needed to know about print to interpret instruction successfully; (2) she was provided a balance of direct instruction and time to explore print on her own; and (3) she was given varied and positive feedback which reinforced successful learning.

McIntyre, Ellen. (1992, September). Young children's reading behaviors in various classroom contexts. *Journal of Reading Behavior, 24*, 339–371.

Studies classroom context and how it shapes children's beginning reading behaviors. Three low SES first grade children were observed and tape-recorded twice weekly during reading instruction for the first 10 weeks of school. The three represented the range of ability within their inner-city U.S. midwestern classroom, populated largely by white Appalachian migrants. Instruction tended to be traditional and basal-driven. Patterns of reading behaviors emerged through a constant comparison of conditions under which each behavior occurred. The three children learned to interpret the various classroom reading contexts, and their responses reflected the conditions of each. The salient conditions included (1) the instruction, (2) the implicit and explicit rules for functioning within that context, (3) the texts the children read, and (4) the physical and affective characteristics of the context. The differences in the contexts were often subtle, yet children followed instructional foci and read accordingly. It was evident that some behaviors occurred across contexts, whereas others did not. For example, children did not transfer many of the skills they were able to employ during direct instruction to unguided reading time.

Neuman, Susan, & Soundy, Cathleen. (1991). The effects of "storybook partnerships" on young children's conceptions of stories. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 141–147). Chicago, IL: National Reading Conference.

Compares the effect of cooperative storybook reading with sustained silent reading (SSR) on children's ability to dictate stories. Two kindergarten (n = 45) and two first grade classrooms (n = 55) were randomly assigned to treatment and control groups. No differences were found between groups on the MRT before instruction. A story-dictation activity that asked children to sequence picture prompts and tell a story about them was administered before and after treatment to assess children's conception of story. In treatment classrooms, children were paired heterogeneously by MRT scores to form "storybook partners." Procedures for story partnering were modeled and practiced prior to treatment. During their 15-minute recreational reading period, the pairs took turns reading or pretend-reading self-selected books in an animated fashion, just as the teacher would—asking questions and pointing to pictures. Control groups continued to engage in their regularly scheduled 15-minute SSR period. Five-minute observations were conducted daily over a 6-week period to total 20 sessions for both groups. Posttest story dictations were evaluated for number of idea units and story complexity. Children who engaged in storybook partnerships were more likely to dictate original stories conforming to basic story structures than were those who participated in SSR. Storybook partnerships appeared equally effective for children at both kindergarten and first grade. Of the interactions observed during the storybook reading, 25% were off-task, suggesting that informal teacher monitoring would facilitate maximum potential for learning.

Torgesen, Joseph K.; Morgan, Sharon T.; & Davis, Charlotte. (1992, September). Effects of two types of phonological awareness training on word learning in kindergarten children. *Journal of Educational Psychology, 84*, 364–370.

Examines the effects of two types of oral language training programs on the development of phonological awareness skills and word-learning ability in kindergarten children. Subjects included 48 pupils identified by the Screening Test of Phonological Awareness as most likely to need training from 143 kindergarten children enrolled in schools serving predominantly working-class families. One of the training programs provided explicit instruction on both analytic (segmenting) and synthetic (blending) phonological tasks; the other program trained synthetic skills only. A language experience control group received no phonological training. Pretest measures assessed segmentation and blending abilities as well as skills in alphabetic reading (WRMT) and general verbal ability (vocabulary subtest from the Stanford–Binet Intelligence Scale). Posttest measures consisted of segmenting and blending measures used on the pretest and a reading analog task. Results revealed that children who received both analytic and synthetic training improved significantly on both types of skills. Children who received only the synthetic skills training improved only on blending skills. Only children receiving training on both types of tasks showed a positive training effect for the reading analog or word-learning task.

Uhry, Joanna K., & Shepherd, Margaret J. (1993). Segmentation/spelling instruction as part of first-grade reading program: Effects on several measures of reading. *Reading Research Quarterly, 28*(3), 219–233.

Investigates whether providing instruction in segmenting isolated sounds in words and representing them with letters has beneficial effects on beginning reading. Subjects, 22 first graders enrolled in two whole language classrooms, received supplementary training in segmenting and spelling phonetically regular words for 20-minute periods twice weekly from October to May. Controls read words and text rather than analyzing speech sounds for the same amount of time. Experimental instruction began with letter sounds followed by segmentation training using blocks to aid in breaking words into phonemes. Subjects then practiced spelling diction on the computer and played computer games programmed from the patterns studied. Subjects were tested with the SIT, the listening comprehension section of the SAT, tests of nonsense-word reading at 8-week intervals, subtests from the WRMT, Gray Oral Reading Tests, the GMRT, the Roswell–Chall Blending Test, segmentation tests, and Spellmaster Diagnostic Tests. Subjects in the experimental group scored significantly higher than controls in reading nonsense words, real words, and on oral passages. They also scored higher in segmenting and spelling. No significant differences were found in comprehension. Results suggest an advantage to those who received training in the blending strategies and a casual relation between segmenting, spelling, blending, and reading.

Carr, Eileen; Bigler, Mary; & Morningstar, Cyndi. (1991). The effects of the CVS strategy on children's learning. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 193–200). Chicago, IL: National Reading Conference.

Tests the initial and maintained effects of the Comprehension, Vocabulary, and Summarization (CVS) strategy. Subjects were 90 second graders from 3 intact classrooms in a midwestern suburban school in the United States. Each class was randomly assigned to one of three treatments: (1) CVS group, which integrated the use of story grammar outlines, vocabulary guide with graphic organizer, and summary writings; (2) story grammar group, which used a story grammar outline and summarization; and (3) vocabulary group, which discussed and answered questions and wrote summaries. Instruction took place over 10 sessions and moved from teacher demonstration and mediated learning to eventual pupil independence. Pre- and posttests were administered on measures of vocabulary, comprehension, and writing (summary and creative). Delayed and long-term delayed posttests were given 4 weeks and 8 months after instruction. ANOVA and ANCOVA analyses found no significant differences in general reading comprehension among the groups. Results of the vocabulary tests indicated that the CVS group performed better than the story grammar group on the literature posttest, delayed test, and long-term delayed test, and on the basal words for the delayed test. Analysis of both the summary and creative writing tasks indicated that the CVS group was superior to the other two groups, an effect maintained long term.

LANCY, DAVID F., & NATTIV, AMALYA. (1992, Summer). Parents as volunteers: Storybook readers/listeners. *Childhood Education, 68*, 208–212.

Describes a parent-volunteer program established in one school serving only kindergarten children in a small town and surrounding farm region in northern Utah. Volunteers were recruited by publicizing the program and inviting parents to informal question-and-answer sessions. Volunteers were shown a series of videotapes prepared to give them strategies to use when reading with children. Half of the school's classrooms had volunteers for 90 minutes a day, 5 days a week. Pairs of children were read to for 20-minute periods. Each child was read to for about 20 minutes twice a week throughout the school year. Evaluation of the program indicated that 45 volunteers came regularly and read with the children. Interviews with 12 of the volunteers and informal discussions with others showed that they felt the program to be successful. Observations of children in the classroom indicated that they were enthusiastic. The program continued under the support of the local parent-teacher association and a library aide, who served as the coordinator.

V-5 Teaching reading—grades 4 to 8

MCKEOWN, MARGARET G. (1993). Creating effective definitions for young word learners. *Reading Research Quarterly, 28*(1), 16–31.

Examines the relative effectiveness of dictionary definitions and definitions revised to address problems found in traditional definitions. Dictionary definitions were analyzed from a cognitive-processing perspective to describe why young learners have difficulty using such definitions to understand word meanings. Definitions were revised according to principles that arose from the analysis. Two tasks compared the effectiveness of the two types of definitions. In the first, 24 fifth graders were presented with 12 words, 6 with dictionary definitions and 6 with revised definitions, and were asked to use the words to write sentences. The dictionary definitions yielded 25% acceptable and 75% unacceptable sentences. Revised definitions yielded 50% of each sentence type. In the second task, 60 fifth graders were presented nonword substitutes for 12 words and definitions of the words and were asked to answer questions. Revised definitions led to significantly more responses that demonstrated a characteristic use of the word ($p < .001$).

Stahl, Steven A.; Burdge, Joyce L.; Machuga, Mary Beth; & Stecyk, Sally (1992, January–March). The effects of semantic grouping on learning word meanings. *Reading Psychology, 13*, 19–35.

Examines the effects of presenting words in semantic groups when a rich form of instruction is also utilized. The subjects consisted of 64 fourth grade pupils. The experimental group comprised two intact classrooms and the control group comprised another classroom in another school. Eighteen words were presented to one experimental group in three semantic groups consisting of six words each. The second experimental group was taught the same words in groups of six constructed by taking two words from each of the three semantic groups. Each group received 2 days of instruction designed to provide definitional and contextual information about each word with active student involvement. The control group received no instruction on the target words. A sentence cloze measure and an examples measure were given as posttests immediately after each unit was taught. A multiple-choice measure and a classification measure were given 1 week after the lessons were taught. Results revealed significant differences between the control group and the two experimental groups on all four measures of word knowledge. However, only the results of the cloze measure revealed a significant difference between the two treatment groups within the experimental condition, with the difference in favor of the group that did not receive words in semantic groups.

Stahl, Steven A.; Richek, Margaret A.; & Vandevier, Roberta J. (1991). Learning meaning vocabulary through listening: A sixth grade replication. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 185–192). Chicago, IL: National Reading Conference.

Examines the effects of learning by listening for sixth grade readers. Subjects were 43 sixth graders in two classes reading at a fourth grade level or above. One of two selections from seventh grade literature anthologies was read to each class. Fifteen difficult words from each selection were used to construct a 30-item multiple-choice test. Two days after hearing the selection, children were given the vocabulary test containing words that they had heard in the selection and words they had not heard. Half the class took the test in written form, while the other half had the items read aloud to them. Pupils knew the meanings of about 6.6% more words from the selection they had heard than from the selection they had not heard. There was no statistical difference between the listening versus reading test modes. The greatest gains were made by children who knew the fewest words before listening.

Landsown, Sharon Hall. (1991, Fall). Improving vocabulary knowledge using direct instruction, cooperative grouping, and reading in junior high. *Illinois Reading Council Journal, 19*, 15–21.

Focuses on a three-step approach to word learning used with junior high pupils over a 6-week period. Children involved in the program were found in intact sixth and seventh grade classes ranging in reading levels. Words taken from novels that the pupils would soon be reading were presented in three stages: instruction of words, refining and clarifying meanings, and extended use. Aspects of direct instruction, active student involvement, and cooperative grouping were included among the three stages. A comparison of pretest and posttest word knowledge revealed large increases in the percentage of words known for all children regardless of grade level or reading ability. No tests of significance are reported.

Benito, Yolande M.; Foley, Christy L.; Lewis, Craig D.; & Prescott, Perry. (1993, February). The effect of instruction in question-answer relationships and metacognition on social studies comprehension. *Journal of Research in Reading, 16*, 20–29.

Assesses the effects of Question-Answer Relationships (QARS) and metacognitive instruction on reading comprehension of social studies texts. Subjects were 1 third, 20 fourth, and 8 fifth graders attending an elementary school in Guam. Children were randomly assigned to one of two classes. Prior to instructional treatment, both classes were pretested on reading comprehension of three social studies selections and on the SDRT. Over an 18-day instructional period, the control group received traditional basal reading instruction, while the experimental group received direct instruction in QARS and metacognitive awareness. Materials used for experimental instruction included 18 selections from a social studies text, each with accompanying questions formulated to elicit three types of information from the reading: (1) "Right There," (2) "Think and Search," or (3) "Author and You." Effects of instruction for both classes were assessed by administering two counterbalanced test packets of three randomly chosen selections, each accompanied by the three question types. Results indicated the experimental treatment was superior to the control treatment in improving responses to reading of social studies text. The experimental treatment resulted in only a slight increase in ability to answer lower level ("Right There") questions. However, significantly better performance was noted for the experimental group's performance on higher level ("Think and Search" and "Author and You") questions. Repeated measures ANOVA also revealed slight gains in the experimental group's SDRT posttest means, while the control group's SDRT posttest means decreased over time.

Graham, Lorraine, & Wong, Bernice Y.L. (1993, April). Comparing two modes of teaching a question-answering strategy for enhancing reading comprehension: Didactic and self-instructional training. *Journal of Learning Disabilities, 26*, 270–279.

Compares the effects of two instructional approaches, self-instructional training and didactic teaching, for teaching 45 average and 45 poor 5th and 6th graders a mnemonic strategy for question-answer relations that are text explicit, text implicit, or script implicit. Subjects completed two oral and one written metacognitive questionnaires to gather information about attitudes toward reading, solutions to specific reading problems, and reactions to the specific mnemonic. Each group spent three 25-minute sessions a week for 3 weeks working on comprehension skills. Control groups used the same materials as the two treatment groups but were not taught the question-answer strategy. Pupils were tested 1 day, 2 days, 1 week, and 2 weeks after training. Training was significant in improving the reading comprehension of both good and poor readers, and self-instruction was more effective than didactic teaching, both immediately and over time. Qualitative analysis of metacognitive questionnaires suggested that responses after treatment appeared to be more focused on meaning and understanding than on decoding, subjects appeared to have more metacognitive understanding, and subjects appeared to have positive opinions of the usefulness of the strategy.

Hill, Jerry M., & Maddox, Eleanor. (1993, Fall). Effect of ReQuest on elementary reading comprehension. *Oklahoma Reader, 29*, 6–11.

Compares the reading comprehension of five classes of fourth grade pupils who engaged in both student-generated (ReQuest) and teacher-generated questions with the comprehension of five classes of fourth grade pupils who experienced teacher-generated questions only. Subjects were administered the reading comprehension subtest of the SDRT as pre- and posttests. Questioning strategies occurred during reading lessons for 12 weeks. No statistically significant differences were found between groups at the conclusion of the study, although the ReQuest group had greater gain scores in literal and inferential comprehension and on the composite score on the posttest measure.

SINATRA, GALE M.; BECK, ISABEL L.; & MCKEOWN, MARGARET G. (1993, April–June). How knowledge influenced two interventions designed to improve comprehension. *Reading Psychology, 14*, 141–163.

Compares the effects of text revision and reader engagement on fifth graders' comprehension of a difficult text. Fifty-four fifth graders in a Pennsylvania suburb were divided into three groups. The control group read an unaltered passage from a fifth grade social studies text. The second group read a version of the passage that had been revised to make links between events more explicit. The third group read the unaltered passage in nine segments with questions from an examiner at each stopping point. All children worked individually with an examiner, reading silently and then retelling what was read and answering open-ended questions. Passage retellings and responses to open-ended questions were tape-recorded and transcribed for both quantitative and qualitative analyses. An ANOVA revealed no significant differences in the number of text idea units recalled or the number of questions answered correctly across the three groups. A qualitative analysis based on the construction of a prototypical recall revealed that the group that was questioned during reading recalled more text units central to the content of the text than did the other groups. In addition, background knowledge affected performance on recall.

ROMANCE, NANCY R., & VITALE, MICHAEL R. (1992, August). A curriculum strategy that expands time for in-depth elementary science instruction by using science-based reading strategies: Effects of a year-long study in grade four. *Journal of Research in Science Teaching, 29*, 545–554.

Examines the effectiveness of a strategy that increases the time allocated to science instruction by eliminating the district-adopted basal reading program and pursuing reading and language arts instruction through reading assignments from science textbooks and trade books. Control subjects were pupils in four intact fourth grade classrooms in a large urban school district. Each day for 1 year, teachers of the control group devoted 90 minutes to basal reading and language arts instruction and 30 minutes to science instruction. Experimental subjects were children in three intact fourth grade classes in a demographically similar school in the same school district. Teachers of the experimental group followed a four-step curriculum plan that included (1) tentative weekly plans that specified the instructional activities for the daily 2-hour lessons of the science program; (2) district-wide skills-based curriculum objectives in science and reading–language arts linked to specific science activities; (3) tentative lesson plans modified as needed to encompass any science or reading–language arts objectives not identified in step 2; and (4) teacher-kept daily records pertaining to activities and objectives achieved during the school year. Separate MANCOVA and subsequent univariate analyses were performed for achievement (ITBS reading, MAT science) and for these affective outcomes: attitude toward learning science in school, self-confidence in learning science in school, attitude toward science activities out of school, attitude toward reading in school, self-confidence in reading, and attitude toward reading activities out of school. Results indicated the experimental groups significantly outperformed controls in both reading and science achievement and displayed more positive attitudes toward science and reading and greater self-confidence in learning science.

MCCARTHEY, SARAH J. (1992). The influence of classroom discourse on student texts: The case of Ella. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy* *research, theory, and practice: Views from many perspectives* (pp. 65–86). Chicago, IL: National Reading Conference.

Investigates one child's internalization of the dialogue that occurred during writing time with attention to the teacher-student writing conference. The case analysis was part of a larger study that included four children from one fifth–sixth grade classroom. The case study focused on Ella, who was selected because she had fluent oral and written abilities, conformed to classroom norms in some ways, and resisted them in others. The teacher had established a writing-process classroom several years previously and featured imagery and figurative language in her lessons and interactions with pupils. Data sources included recorded classroom observations, interviews with the teacher and student, and drafts of Ella's writing. Ella appeared to develop intersubjectivity with her teacher during writing conferences. She used several features of classroom dialogue in her texts. While Ella understood the elements of language that the teacher valued, she did not simply accept or imitate them, but instead transformed the knowledge in new ways in her own writing.

WILLIAMS, NANCY L.; KONOPAK, BONNIE C.; WOOD, KAREN D.; & AVETT, SUSIE. (1992). Middle school students' use of imagery in developing meaning in expository text. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 261–267). Chicago, IL: National Reading Conference.

Examines the effects of imagery training and practice on middle school students' recall of expository texts. Two intact classrooms in a rural middle school were randomly assigned to an imagery instruction group ($\underline{n}$ = 25) or traditional instruction group ($\underline{n}$ = 25). No group differences were found on CAT scores prior to treatment. Instructional materials included 2 content area passages (science, social studies) of approximately 600 words each. The study was conducted over 2 days, with 1 day devoted to each content area. Tests of prior knowledge were given before instruction began. The imagery group received direct training and guided practice on the use of imagery. The passage was presented to the traditional group without the imagery training and prompts. Both groups were given probed recall measures after reading the passage. Tests of prior knowledge revealed that students knew little about either passage topic. Separate ANOVAS for each content area showed significant differences between the groups, favoring the imagery group for the social studies passage but not for the science passage. No interaction effects were found.

KOSKINEN, PATRICIA S.; GAMBRELL, LINDA B.; KAPINUS, BARBARA A. (1993). The use of retellings for portfolio assessment of reading comprehension. *Literacy: Issues and Practices, 10*, 41–47.

Reexamines data from an earlier study to compare two methods of scoring pupils' retellings of texts and to determine the effects of practice in retelling on comprehension of proficient and less-proficient fourth grade readers. Subjects, 48 fourth graders, were considered proficient if they scored above the 68th percentile on the CAT and less proficient if they scored below the 41st percentile. Proficient readers read and retold four stories at fourth grade readability level, and less-proficient readers read four stories at second grade readability level. Taped retellings, previously examined for literacy elements with text-based outlines, were now analyzed with a holistic scale assessing theme, coherence, major plot episodes, major plot elaborations, story structure awareness, and use of stylistic devices. Significant differences were found between retelling sessions 1 and 4 for proficient readers with respect to plot elaborations, stylistic devices, and total literacy elements. No significant differences were found for less-proficient readers. Results of the text-based analysis from the earlier study differed from the results of the more holistic assessment, suggesting that the text-based procedure of analysis may be more sensitive for showing growth in retelling proficiency, especially for less-proficient readers.

SHEFELBINE, JOHN. (1990). A syllabic-unit approach to teaching decoding of polysyllabic words to fourth- and sixth-grade disabled readers. In Jerry Zutell & Sandra McCormick (Eds.), *Literacy theory and research: An analysis from multiple paradigms* (pp. 223–229). Chicago, IL: National Reading Conference.

Designs and tests the effectiveness of syllabication instruction that stresses automaticity in individual syllable and pattern identification. Sampled were 51 pupils in grades 4 and 6 who had been identified as having difficulty with syllabication according to the word-identification subtest of the WRMT and the vocabulary subtest of the SAT. Children were pulled out of class and provided direct instruction in 10-minute lessons over 30 sessions. Syllabication instruction involved teaching open and closed syllable units, automaticity in affix and root recognition, parsing and blending common words, and division practice. Pupils in the control group received typical language arts instruction. Treatment effects were assessed by the total number of correct words read on the WRMT and the San Diego Quick Assessment test using a pretest-posttest design. Children receiving explicit instruction in syllabication made significantly greater progress in identifying polysyllabic words than those who did not receive instruction.

CARR, KATHRYN. (1992, Fall). An early-day integrated language arts program made a difference in reading achievement. *Journal of Reading Education, 18*, 2–15.

Presents data on a whole language program implemented from 1976–1978. Teachers and children in all classes at the K–8 levels of one rural Kansas district were included. Informal instruments and the MAT were used to evaluate student performance. Only data from the MAT were reported. Analyses were completed by performing comparisons of posttest performance with local and national norms. At the end of 2 years of instruction, MAT scores on reading comprehension subtests across grades 2 through 8 showed greater gains than expected in quartile distributions based on local norms of the previous 5 years. Reading comprehension scores were significantly greater than expected based on national quartile distributions for grades 1 through 4. Gains in grades 5 through 8 brought scores up to national quartile distributions. Informal evaluation procedures showed achievement of performance objectives in listening skills, oral language, and written communication at all grade levels.

BRYANT, CORALIE, & LEE, LINDA. (1991). Group oral response to literature: An experiment in large-scale assessment. *English Quarterly, 23*, 15–22.

Describes the process used to review a language arts curriculum that had been implemented in the Winnipeg, Manitoba, school district for a 5-year period. Findings of the review are reported. An instrument was designed specifically to assess pupils' abilities to respond to literature, articulate ideas, and work harmoniously in large and small groups. Teachers used the instrument as they observed a random sample of groups drawn from various eighth grade language arts classes from 18 junior high schools in the district. Groups heard three poems read aloud. After each reading, students discussed the poems according to specified guidelines, first in small-group ($\underline{n} = 5$) and later in large-group ($\underline{n} = 25$) settings. Poetry was found to be a difficult genre with which to work. In both grouping situations, tracking of pupil behavior revealed infrequent demonstration of the ability to make analogies or to go beyond the literal level. Children appeared to interact much more comfortably in small groups than in large groups.

HANSEN, JANE. (1992, October). Students' evaluations bring reading and writing together. *The Reading Teacher, 46*, 100–105.

Assesses the potential of children as self-evaluators and the impact of attending to such evaluations on planning of reading and writing programs. The study was conducted in one elementary school in a small upper–middle-class community. Near the beginning of the study, pupils in grades 1 through 5 were asked questions probing what they had learned and still needed to learn in reading and writing. Response analysis indicated that children at all levels typically perceived themselves as able to pursue their own writing goals in school. However, with regard to reading, they felt the school program was so prescribed that they could only pursue their own reading goals in self-selected books found in their homes. Based on data from the interviews, administrators and teachers focused on revising classroom reading programs to provide children with ample opportunity to read and respond to books of their choice outside the confines of ability grouping and to receive skill instruction based on their own evaluations of their reading and writing needs. Anecdotes of children who found success through the program are provided.

V-6 Teaching reading—high school

NYSTRAND, MARTIN; GAMORAN, ADAM; & HECK, MARY JO. (1993, January). Using small groups for response to and thinking about literature. *English Journal, 82*, 14–32.

Discusses previous research findings by the authors that showed negative effects in literature achievement for students who worked in small groups. A follow-up study examining dimensions of small-group work that influence achievement and thinking about literature is then reported. Fifty-four 9th grade English classes in nine midwestern schools in the United States participated in the study. Researchers visited each class on four occasions, during which the time span of and range of activities in small-group work were recorded. Data analysis showed small-group activities took place in only 29 of 216 classes, with each activity averaging approximately 15 minutes in length. Analyses of group practices revealed that highly structured small-group work driven by teacher questions that required convergent responses was not as effective as small-group work that promoted student autonomy through discourse or open-ended personal response. In fact, the higher the degree of autonomy provided, the more likely group work would contribute to achievement.

WATSON, MARITA; BAARDMAN, S.; STRAW, STANLEY B.; & SADOWY, PAT. (1992, Winter). Collaboration and the curriculum: An investigation of six grade twelve students' responses to novels in a collaborative classroom. *Reflections on Canadian Literacy, 10*, 160–167.

Assesses whether the objectives of the Manitoba language arts curriculum are achieved by students taking part in unsupervised, small-group literature study. Also examined were students' observations on the use of collaboration for developing response to novels. Subjects were two groups of 12th graders consisting of no more than five students each. Over at least 5 days, each group studied one novel that had been selected by the group from a list made available by the teacher. After each study session, each student made a 20-minute journal entry directed at specific points of the novel discussion as well as his or her reaction to the group activity. Six of the subjects were randomly chosen for in-depth examination of their written responses to the novel. Findings revealed that goals of social awareness and personal growth were met. The students reacted positively to the group process. However, while growth in objectives related to literacy awareness was substantial, it was inconsistent.

RICHARDSON, JUDY S. (1992). Taking responsibility for taking tests. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 209–215). Provo, UT: College Reading Association.

Tests the impact of an activity designed to help high school students understand their responsibilities in taking tests. Average to high ability students in two intact classrooms, grades 10 and 11, were subjects. A test-study-report activity consisting of five questions was used with both groups for two major tests. Examination of student responses indicated that younger, less-motivated students seem more willing to place blame on others when they performed poorly. Average study times for tests did not vary much from test 1 to test 2 (26 to 22 minutes respectively for grade 10). Most students identified specific strategies or a general suggestion to study for future examinations, indicating that the reporting activity helped them begin to be reflective about and take responsibility for their test performance.

V-7 Teaching reading—college and adult

WILLIAMS, LARRY R.; VAICYS, CHERYL; & VAICYS, REY. (1992, Fall). Support services for developmental learners at two-year institutions in the southeast United States. *Research and Teaching in Developmental Education, 9*, 5–18.

Summarizes data from 101 surveys of 2-year postsecondary institutions in Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina to determine the level and extent of support services available to students who are enrolled in higher education courses but are lacking necessary skills and knowledge in reading, writing, and mathematics. Data collected addressed the approaches used, the types of services offered, and the personnel who delivered those services. Support services were available at over 90% of the institutions surveyed. The largest percentage of respondents indicated developmental education or skills activities were handled within a parent department such as English or mathematics. The second most popular pattern was a separate department devoted to developmental or basic skills. Support services were wide ranging, with individual counseling being the most popular form. Most programs were staffed by full-time professionals assisted by part-time personnel and peer tutors. Fifty percent of the instructional staff reported being specifically trained to work with students.

FAIRBANKS, COLLEEN M. (1992, Winter). Labels, literacy, and enabling learning: Glenn's story. *Harvard Educational Review, 62*, 475–493.

Relates the social and academic consequences of one individual's experience in the special education system. How that individual emerged from the stigmatization of the LD label through the support of a tutor at a university reading and learning skills center is discussed.

STAHL, NORMAN A.; BROZO, WILLIAM G.; SMITH, BRENDA D.; HENK, WILLIAM A.; & COMMANDER, NANNETTE. (1991, Summer). Effects of teaching generative vocabulary strategies in the college reading program. *Journal of Research and Development in Education, 24*, 24–32.

Compares the effectiveness of three generative strategies and one traditional strategy on the initial acquisition and retention of new vocabulary among college developmental readers. Subjects were 80 first-year college students enrolled in four sections of a developmental reading or study strategy course at an urban university. Each of the four intact classes was randomly assigned to a treatment condition: traditional, vocabulary log, imagery, or suggestopedic. A total of 150 words taken from Dale and O'Rourke's The Living Word

Vocabulary was randomly divided into five groups of 30 words each. Students were presented with one group of words each week for 5 weeks. The immediate and 3-week delayed posttests consisted of 50 words selected randomly from the 150 word set and presented in a multiple-choice format. The data were analyzed using a two-factor mixed ANCOVA, with pretreatment performance on the Basic Word Vocabulary Test as the covariate. No significant differences were found among the four treatment groups on either the immediate or the delayed posttest.

MEALEY, DONNA L., & FRAZIER, DEIDRA W. (1992). Directed and spontaneous transfer of textmarking: A case study. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 153–164). Provo, UT: College Reading Association.

Presents a case study on the use and transfer of annotating as a strategy for content area learning. Case study data were derived from a 20-year-old, male, second-year college student enrolled in an introductory biology and a developmental reading course. During the reading course all students were instructed in annotation; chapters in the biology texts were used for the annotation. Constant comparative analysis was used on transcripts of biweekly interviews and document analysis of authentic annotations. The quantity and quality of annotations, how annotations changed over time, and perception of use of and actual use of annotation in other courses were the foci of the analyses. Adjustments in text-marking resulted in greater quantity but little improvement in the quality of annotations. What to annotate and the degree of detail to include were determined by the student's perceived knowledge of material, performance on examinations, and expectations of tests. The subject's lack of strong ability to paraphrase and organize information affected the quality of the annotations and contributed to poor test performance. Lack of transfer to other courses was observed.

STEWART, ROGER A., & CROSS, TRACY L. (1993, April–June). A field test of five forms of marginal gloss study guides: An ecological study. *Reading Psychology, 14*, 113–139.

Compares the effects of phenomenological gloss study guides, more traditional gloss study guides, and combination gloss study guides on subjects' comprehension and retention of information presented in an informational article. Sixty 1st- through 4th-year college students enrolled in an introductory education course were randomly assigned to five groups. Each group used a different type of gloss, ranging from phenomenological to traditional, in conjunction with reading an article that was assigned as part of the regular reading associated with the course. Each group read the same 6,500-word article (readability level of grade 13). Immediately after reading and 4 weeks later, each group took a 20-item multiple-choice test designed to test various levels of comprehension. A repeated measures ANOVA revealed that a combination of the phenomenological gloss and the traditional gloss significantly enhanced incidental learning on the delayed posttest as compared to the pure phenomenological gloss and the pure traditional gloss. No significant effects were found for intentional learning.

SCALES, ALICE M. (1991–1992). College students' reading and study skills. *Forum for Reading, 23*, 59–65.

Examines the study skills used by college students prior to and after a course in reading and study skills. Volunteer subjects for the study were 18 females and 24 males enrolled in semester-long college reading and study skills classes. Subjects responded to Preferred Method of Study Questionnaire (PMSQ) at the beginning and end of the semester during which they were taught a variety of study techniques. Questions on the PMSQ probed (1) methods students used to grasp the meaning of a new chapter, (2) students' choice of study method for history chapters as compared to science chapters, (3) students' methods of taking multiple-choice tests as compared to essay tests, (4) students' study behavior while reading, (5) students' experimentation with different study methods, and (6) questions generated by students prior to reading. Relative frequencies computed on responses to each question suggested students changed their study habits and used various study skills presented in the course.

O'NEILL, STEPHEN P., & TODARO, JOSEPH. (1991, Fall). The effect of metacognitive training on the reading achievement of urban community college students. *Journal of College Reading and Learning*, *24*, 16–31.

Evaluates the benefits of metacognitive training among community college students enrolled in developmental reading classes. Subjects who participated through the course of the study were 151 students enrolled in lower or upper level developmental reading and study skills classes. Subjects were assigned to their respective levels on the basis of scores on the Reading Assessment Test (RAT). Students in the experimental classes (n = 102) were taught reading and study skills along with various metacognitive strategies by means of direct explanation and modeling; students in traditional classes (n = 49) were taught the same reading and study skills without explicit reference to metacognitive strategies. Measures administered to all subjects prior to and at the end of the semester included the How I Read Scale—which yields scores on the metacognitive activities of perceiving, monitoring, and summarizing—and the RAT—which yields scores for comprehension of main idea, direct statement, or inference. Results indicated that the metacognitive method was significantly more effective with the upper level students in improving their monitoring behavior but not their perceiving and summarizing behaviors. Traditional direct instruction was more effective with lower level students in producing improvement in overall metacognitive behavior. Metacognitive training was not significantly more effective than traditional instruction in producing overall improvement in reading comprehension.

ZAWAIZA, THEDA RUTH WILES, & GERBER, MICHAEL M. (1993). Effects of explicit instruction on math word-problem solving by community college students with learning disabilities. *Learning Disabilities Quarterly*, *16*, 64–79.

Assesses the effects of two training procedures for helping LD postsecondary students solve word problems. Two groups of community college students participated in the study. Included were 54 students identified as LD according to state guidelines and 22 normally achieving students enrolled in an introductory calculus course who served as controls. LD students were assigned to one of three experimental groups: translation training (T); diagram training (D); or attention-control (AC). The T group was taught explicit methods for translating comparison-type word problems; the D group was taught these methods and was also shown how to diagram relations between word-problem components and act upon schemata; and the AC group merely discussed the problems and strategies for solving them with no explicit problem-solving instruction. A pretest-posttest design was used to determine the effects of the two types of instruction, with solution accuracy and error-pattern analyses being foci of interest. Results of repeated measures ANOVA on pretest and posttest solution accuracy revealed the D group to be superior in performance to other experimental groups. The D group's posttest reversal-error performance also closely resembled that of controls.

THORNTON, MARY M. (1992, Fall). Read faster, read better: Results of a high performance reading course at Mississippi State University. *Reading Improvement*, *29*, 200–206.

Presents data collected during a three–semester-hour reading improvement course for 307 students ranging from first-year undergraduates through graduate students to suggest that reading habits and reading rates can change with instruction that focuses on vocabulary, rate flexibility, and varying purposes for reading. Students were administered the NDRT as pre- and postmeasures. Charts showing percentile improvement in vocabulary, comprehension, and rate are included, with data reported by ethnic classification.

MEALEY, DONNA, & KONOPAK, BONNIE. (1992, Summer). Getting beyond "grade level" thinking: Toward whole language adult literacy programs. *Reading: Exploration and Discovery, 14*, 42–50.

Investigates the nature of instructional programs for adult literacy. The authors explore recent views on the nature of adult literacy programs and present results of a survey of 10 adult literacy program providers in Louisiana. The survey revealed that all 10 programs used an individual-oriented skills-based model. Tutors employing this model worked one-on-one with their students but did very little teaching. Rather, they monitored students' progress and directed students through workbook sections and levels. Arguments opposed to the traditional skills approach and in favor of a holistic approach based on the notions of whole language and participatory literacy are presented.

V-8 Instructional materials

JACHYM, NORA. (1992, Summer). Task characteristics of first grade reading workbooks. *Reading Improvement, 29*, 110–119.

Analyzes the task characteristics of workbooks from four 1st grade basal reading series. A formal content analysis was used to assess the consistency of tasks with basal-unit lesson plans. Results of the content analysis indicated that all four workbooks were similar. Nearly 60% of all the items required either sight recognition of words, the identification of consonant sounds, or filling in the blanks in incomplete sentences. Approximately 17% of the items required reading two or more related sentences and writing a single word. Few opportunities were offered for children to practice reading and writing extended text. An average of 99% of the tasks related to the teacher-directed lesson within the unit plan; however, less than 33% related to the theme or topic of the reading selection. Descriptive critiques suggest a number of task features that could render the workbooks problematic: (1) confusing layout; (2) potential for formulaic shortcuts; (3) multiple correct answers; (4) confusion in picture naming; (5) misleading presentation of concepts; and (6) inappropriate or narrow concept load.

WEPNER, SHELLEY B., & FEELEY, JOAN T. (1992, December). Basal selection: What questions should be asked? *Florida Reading Quarterly, 29*, 7–13.

Presents results of an analysis of first and fourth grade readers in seven basal reading series with 1989 copyrights. The researchers questioned the literature selections within basals, the ratio of skill work to "real" reading, the treatment of skill work within the programs, and the emphasis on and guidance of strategic reading. The majority of first grade basals had more basal-created stories than trade book originals; by fourth grade, 80% of the stories came from outside sources. In general, first graders were offered 11 pages of skill work for each seven to nine pages of literature. Fourth graders could complete an average of eight pages of skill work for each 8- to 15-page selection. For first graders, decoding activities predominated in skill work, with 39% of the skills sheets or workbook pages devoted to decoding. In addition, 72% of the first graders' skill work was unrelated to what was presented in the basal readers. By fourth grade, comprehension prevailed as the most commonly offered skill activity (43%). Again, 57% of all the skill work was unrelated to what children were reading. At both first and fourth grade levels, most basals gave attention to summarizing, retelling, predicting/verifying, and thinking-aloud strategies. Only two programs had first graders generate questions, and most did not emphasize paraphrasing at either level.

McCallum, Richard D., & Bondy, Elizabeth. (1992, Summer). What's new about the new reading materials. *California Reader*, *25*, 2–5, 30–34.

Reports the nature of changes in three basal reader series selected in the most recent California reading-textbook adoption, one that represented traditional views and one that represented new directions. Randomly chosen selections from the beginning, middle, and end of each of the first, third, and fifth grade levels were examined. Analysis resulted in a teaching-learning model that summarized the content and process of instruction in each reading program. Two dimensions of program purpose were identified: one represented the program's orientation to language development, and the second the program's attention to cognitive and metacognitive aspects of reading and language. The three programs differed in their orientation to language development: from a strict reading focus for the more traditional program to influences of the whole language movement in the least traditional. Similarly, programs differed in their approach to the cognitive dimension of the reading process. The research also noted differences in the expectations for pupils and teachers across programs and in the amount of teacher decision making.

Beck, Isabel L., & McKeown, Margaret G. (1991, October). Research directions: Social studies texts are hard to understand: Mediating some of the difficulties. *Language Arts*, *68*, 482–490.

Reviews research analyzing potential difficulties of reading expository texts and the effects of those difficulties on pupil learning. In addition, the review suggests ways to overcome the problems presented by expository tests. Factors that lead to difficulty of comprehension of social studies texts include a lack of coherence of presentation and a lack of connection between new and known information. Research on the effects of revising textbook passages to establish coherence and to present information explaining the connections from cause to event and from event to consequence is discussed. One study is cited in which children were given either a revised or the original text. Both coherence of text and background knowledge were found to contribute to comprehension in independent ways.

Shepardson, Daniel P., & Pizzini, Edward L. (1991, November). Questioning levels of junior high science textbooks and their implications for learning textual information. *Science Education*, *75*, 673–682.

Analyzes eight commonly used junior high school science textbooks to determine if there are differences in the cognitive levels of questions asked, if the types vary among science disciplines, and if the questions differ among chapters within the various books. Books were divided into four sequential clusters by chapters, and one chapter in each cluster was sampled. Questions were divided into input-, processing-, and output-question categories. A two-way ANOVA was used to compare textbooks, chapters, and disciplines by question level. Of 3,140 questions analyzed, 2,474 were at the input level, 456 were at the processing level, and 210 were at the output level. While there was no statistically significant difference in the proportion of input, processing, and output questions in the textbooks analyzed, there was a greater proportion of lower level input questions within the textbooks analyzed. No differences were observed in the proportion of input, processing, and output questions by discipline or within the chapter clusters analyzed. Each chapter cluster was similar in the proportion of input, processing, and output questions. Extensive use of low-level cognitive questions appears to restrict text comprehension, suggesting a need for higher level cognitive questions.

BARRON, BENNIE G.; HENDERSON, MARTHA; & EDWARDS, LINDA. (1992, Summer). An analysis of changes in a selected basal reading series. *Education, 112*, 606–608.

Analyzes the 1983 and 1989 editions of one basal series in an effort to determine areas and types of revisions. Both teachers' guides and pupils' texts were examined. Areas of analysis of the teachers' editions included (1) philosophy and developmental guidelines, (2) scope and sequence, (3) program pacing, (4) total number of pages, (5) lesson plan details and organization, (6) unit themes, (7) vocabulary, comprehension, and reading and study skills, (8) activities for promotion of language growth, (9) assessment techniques, and (10) time-saving resources and other materials. In the newer version, there was more emphasis on integration of the various language arts and the use of writing activities to incorporate reading with meaningful responses to literature, along with an expansion of assessment techniques. The examination of pupil texts revealed an expanded use of illustrations, an increase in stories from literary lists, an increase in the mean number of words per story, and an increase in the mean number of sentences per selection.

V-9 Teaching—grouping/school organization

CALFEE, ROBERT C., & WADLEIGH, CLAY. (1992, September). How Project READ builds inquiring schools. *Educational Leadership, 50*, 28–32.

Presents portraits of several elementary schools across the United States that have implemented the Project READ/Inquiring Schools model. Characteristics shared by classrooms in the various schools are attributes of a critical literacy curriculum and lesson designs that foster the development of an inquiry approach to authentic tasks. Schools that have adopted the model encourage use of strategies that foster interaction, collaboration, and reflection among students and professionals. Improved performance over traditional schools has been noted.

KAMIL, MICHAEL L., & RAUSCHER, W. CHRISTINE. (1990). Effects of grouping and difficulty of materials on reading achievement. In Jerry Zutell & Sandra McCormick (Eds.), *Literacy theory and research: An analysis from multiple paradigms* (pp. 121–127). Chicago, IL: National Reading Conference.

Compares the effects of instruction in small group versus whole group and the difficulty of instructional materials to measured reading ability. Intact classrooms, grades 3 to 5, from a suburban school district volunteered for the study. These classes were categorized as traditional ability grouping ($\underline{n} = 11$), whole-group on-level instruction ($\underline{n} = 11$), and whole-group above-level instruction ($\underline{n} = 14$). Instruction used basal reading materials. Comprehension and vocabulary scores were derived from IRIS and the reading subtest of the ITBS. No differences were found between whole-group and ability-grouped instruction. Discrepancy of the materials from measured reading ability of the pupils accounted for a significant amount of variance in the scores. Difficult materials seemed to produce higher scores.

TOPPING, K.J., & LINDSAY, G.A. (1992, September). The structure and development of the paired reading technique. *Journal of Research in Reading, 15*, 120–136.

Reviews literature related to the use of paired reading. The authors define the paired reading technique and provide a historical background for its development. Theories of learning that support paired reading are discussed. In addition, studies of various forms of paired reading are described and their findings discussed. Results of the research reviewed suggest that while a single factor associated with the effectiveness of paired reading has not yet been identified, a number of factors with strong theoretical support mediate the process.

V-10 Corrective/remedial instruction

WASIK, BARBARA A., & SLAVIN, ROBERT E. (1993). Preventing early reading failure with one-to-one tutoring: A review of five programs. *Reading Research Quarterly*, *28*(2), 179–200.

Considers the effectiveness of five tutoring programs—Reading Recovery, Success for All, Prevention of Learning Disabilities, Wallach Tutoring Program, and Program Tutorial Reading—under the headings model of reading, structure of tutoring, and results. The latter heading includes the research to be found related to each program. The review combines elements of meta-analysis with traditional reviews in using a set of procedures termed best-evidence synthesis. In the procedures, study outcomes are characterized in terms of effect size, the difference between experimental and control means divided by the control group standard deviation. If means or standard deviations are not presented, effect sizes are estimated from F, t, or other statistics. The numerator of the effect size formula may be adjusted for pretests or covariates by means of gain scores or ANCOVA, but the denominator remains always the unadjusted individual-level standard deviation of the control group or a pooled standard deviation. Studies were included only if they evaluated one-on-one instruction by adults working with first graders and if they had been carried out for at least 4 weeks; 16 studies met the criteria for inclusion. The review indicated that effect sizes were positive in nearly every study. Programs with the most comprehensive models of reading and the most complete instructional interventions, such as Reading Recovery and Success for All, tended to have greater impact than programs that addressed only a few components of the reading process. In addition, programs using certified teachers appeared to obtain greater gains than those using paraprofessionals. It was concluded that for tutoring to be most effective, it must improve the quality of instruction, not simply increase the amount of time, incentive value, and appropriateness to pupils' needs.

WADE, BARRIE. (1992, June). Reading Recovery: Myth and reality. *British Journal of Special Education*, *19*, 48–51.

Reviews the evidence for the effectiveness of the Reading Recovery program. The research reviewed is primarily from New Zealand, Australia, and England. While the author notes that Reading Recovery has been successful at times, he also notes that the program is not likely to be the answer to all problems. However, it is viewed as a potential help.

MANTZICOPOULOS, PANAYOTA; MORRISON, DELMONT; STONE, ELIZABETH; & SETRAKIAN, WINIFRED. (1992, May). Use of the SEARCH/TEACH tutoring approach with middle-class students at risk for reading failure. *Elementary School Journal*, *92*, 573–586.

Investigates the benefits of using two tutoring approaches in first grade (TEACH and phonetics) for 168 middle-class children screened with SEARCH in kindergarten and determined to be at risk for developing reading problems. Subjects were assessed with portions of the K-ABC, sections of the SDRT, subtests from the WRMT, and the Phonetically Regular

Words list from the Test of Written Spelling. Subjects also completed a group academic achievement test, with the test varying by district (SAT, CTBS, or CAT). Children in the intervention groups received one-on-one tutoring twice a week for a total of 50 half-hour sessions. TEACH subjects completed activities of visual, visual-motor, auditory, body image, and intermodal focus. Subjects in the phonetic intervention received 20 minutes of reading drill and 10 minutes of spelling drill using a combination of commercial programs. Over a 2-year program, children in the phonetic tutoring group scored higher in word attack than did other children. Children who received one-on-one tutoring did not score better than at-risk control children on group achievement tests. An examination of subgroups within the sample of at-risk pupils showed that marginally at-risk children in the phonetic group appeared to profit most from one-on-one tutoring. Results were interpreted as questioning the effectiveness of the TEACH tutoring model.

IVERSEN, SANDRA, & TUNMER, WILLIAM E. (1993, March). Phonological processing skills and the Reading Recovery program. *Journal of Educational Psychology, 85*, 112–126.

Tests the effects of adding systematic instruction in phonological recoding skills to the instruction offered in the Reading Recovery program. Subjects were 96 1st graders drawn from a large pool of at-risk readers from 30 schools across 13 U.S. school districts. Subjects were assigned to one of three matched groups of 32 children: a modified Reading Recovery group, a standard Reading Recovery group, and a standard intervention group. Participants in the standard and modified Reading Recovery groups received regular Reading Recovery lessons, and the children in the modified Reading Recovery group also received explicit training in phonological recoding skills. The standard intervention group received support services normally available to at-risk readers (e.g., Chapter 1). All subjects were pre- and posttested on Clay's Diagnostic Survey, the Dolch Word Recognition Test, and three phonological processing measures. Data were analyzed using ANOVA procedures. Results indicated that pupils selected for Reading Recovery were particularly deficient in phonological processing skills and that their progress in the program was strongly related to the development of these skills.

RANKIN, JOAN L. (1992, November). Connecting literacy learners: A pen pal project. *The Reading Teacher, 46*, 204–214.

Offers procedures and results from a pen pal project between university education majors and elementary special education pupils. Approximately 30 second through sixth graders, with reading levels gauged by standardized reading measures to range from preprimer through fourth grade, corresponded weekly with university students enrolled in a diagnostic/corrective reading course. Resource room teachers ensured that the special education children's writing errors were not corrected, and that they were encouraged to apply writing skills they were learning in class. In addition, resource room teachers kept university students informed of the instructional content of the children's classes and school activities to watch for and encourage. University students were expected to respond thoughtfully to their pen pal's needs and interests, to keep files of the children's letters, to observe for writing development over the course of the semester, and to submit their analysis in the form of a report both to their pen pal's teacher and to the university professor. A case description of the project's procedures in one class is described. Specific growth areas included increased ability to use correct friendly letter form (observed in 47% of the children) and increased use of communicative writing (observed in 78% of the children). Resource teachers also noted their pupils' high enthusiasm; the university professor noted application of content of college courses to university students' analyses of writing growth.

KANE, HEATHER, & GORDON, CHRISTINE J. (1992, Summer/Fall). Is intervention an effective tool in dialogue journals? *Reading-Canada-Lecture, 10*, 84–87.

Reports a case study of one second grade boy with whom teacher intervention in journal writing was used to enhance his writing performance. The pupil was of average to below-average reading ability and appeared to be experiencing more difficulty in responding in the writing journal than were his classmates. The teacher intervention proceeded from whole-class discussions to small-group work (three pupils) to individual discussions of the subject's specific weaknesses. To examine the effects of the intervention on the child's writing, journal entries prior to and during the intervention were analyzed. They revealed that following initiation of the intervention, he began to present more detail in his writing and to express opinions and feelings with more clarity.

REETZ, LINDA J., & HOOVER, JOHN H. (1992). The acceptability and utility of five reading approaches as judged by middle school LD students. *Learning Disabilities Research and Practice, 7*, 74–86.

Investigates the social acceptability of five reading approaches—language experience, direct instruction, multisensory, neurological impress, and basal reader—as judged by middle school LD children. Subjects were 21 boys and 11 girls in grades 6 through 9 from five school districts in Iowa. All were classified as LD. In small groups, children were read a description of each reading approach and were shown videotaped vignettes of each approach in use. Subjects rated the acceptability and utility of each approach on a 4-point Likert scale. They showed a preference for the basal approach over others and noted that it was most like the instructional approach employed with them.

MCCUTCHEN, DEBORAH; LAIRD, ANNE; & GRAVES, JAN. (1993). Literature study groups with at-risk readers: Extending the grand conversation. *Reading Horizons, 33*(5), 313–328.

Evaluates the effectiveness of literature study groups with 40 4th grade pupils who had been identified as experiencing reading difficulties and who scored below the 3rd stanine on the MAT. Pupils read and discussed classic children's literature in groups led by adult volunteers. Pupils were given discussion strategy training to distinguish between questions calling for personal opinion and interpretation and those requiring specific text-related information. Data from two discussion groups are shared to demonstrate how leaders' questions and feedback encouraged or discouraged pupil participation in discussion and quality of response. Lower level readers were successful and motivated participants when they were engaged by thoughtful leaders who opened up discussion opportunities and were responsive to students' reactions and needs.

BRISTOR, VALERIE J. (1992, Winter). "Cool! Mrs. B. gave our reading books away!" Teaching reading through science. *Indiana Reading Quarterly, 25*, 6–11.

Examines the effectiveness of teaching reading in conjunction with science to at-risk children. The experimental and control subjects were at-risk pupils assigned to two 4th grade and three 5th grade self-contained classrooms in a large urban school district. Control subjects received reading instruction through the district-adopted basal reading materials; science instruction took place during the regular content time allocation. The experimental subjects received 2 hours of in-depth science instruction in conjunction with instruction in reading and the language arts. After 5 months, reading achievement was measured on the ITBS Reading subtest, and science achievement was measured on the MAT Science subtest. Attitude toward learning and self-confidence in learning were assessed using a criterion-referenced–based Likert-type format. Simple effects analysis showed significant reading improvement of a half year's growth for the experimental 5th graders (n = 13) but not for the 4th graders (n = 33). Significant improvement in science achievement was noted for both 4th (n = 37) and 5th graders (n = 61) in the experimental group. The integrated curriculum treatment also had a significant positive influence on the learning attitude and self-confidence of the at-risk children as far as in-school and out-of-school reading and science activities were concerned.

SCRUGGS, THOMAS E.; MASTROPIERI, MARGO A.; BAKKEN, JEFFREY P.; & BRIGHAM, FREDERICK J. (1993, Spring). Reading versus doing: The relative effects of textbook-based and inquiry-oriented approaches to science learning in special education classrooms. *Journal of Special Education, 27,* 1–15.

Compares the impact of textbook-based and inquiry-oriented approaches to science learning on special education students. In a counterbalanced within-subjects design, 26 junior high LD students were taught two science units in which they received both treatments over a 2-week period. Immediate and delayed recall tests administered at the completion of each unit and interviews focusing on approach preference were analyzed using *t* tests and binomial test procedures. Findings revealed the instructional superiority of the inquiry-oriented approach, although vocabulary acquisition in both conditions was limited. Activity-based learning was overwhelmingly preferred by students involved in the study.

DUFFY, GERALD G. (1993, January). Rethinking strategy instruction: Four teachers' development and their low achievers' understanding. *Elementary School Journal, 93,* 231–247.

Reports on the 4th year of a 5-year study of how low-achieving pupils become strategic readers. In the complete study, more than 60 volunteer teachers and principals from eight rural Michigan school districts are learning to help pupils become strategic readers by relying less on passive practice and more on teacher judgments in response to pupil needs. For this part of the investigation, the strategy lessons of four 2nd and 3rd grade teachers from two schools were observed twice a month for 1 year as they taught their low reading groups of four or five children. Prior to each lesson, the researcher discussed each teacher's instructional intention with her. After each lesson, the researcher interviewed the 19 children about their understanding of the strategy they were being taught. Data were analyzed by comparing lesson transcripts with the results of postlesson interviews. The lesson observations and pupil interview responses suggested that children's learning of strategies was limited to naming strategy labels and to vague understandings of how or when to employ strategies. The researcher noted the difficulty teachers have (1) focusing low achievers on the process of being strategic rather than on the labels for various strategies, (2) helping low achievers understand the mental processing involved in being strategic, and (3) using authentic literacy tasks to teach strategy instruction.

MALONE, LINDA DUNCAN, & MASTROPIERI, MARGO A. (1991–1992, December/January). Reading comprehension instruction: Summarization and self-monitoring training for students with learning disabilities. *Exceptional Children, 58,* 270–279.

Compares the effects of three training conditions on the comprehension abilities of LD children. Subjects were 45 LD pupils in grades 6, 7, and 8 who were stratified by sex and grade and then randomly assigned to one of three treatment conditions: summarization training, summarization training with a self-monitoring component, or traditional reading comprehension instruction. Common materials consisted of 10 stories, each approximately 200 words in length, with two passages used for training and two for posttesting. Two days were allowed for training and 1 for posttesting. Pupils were interviewed before and after training relative to the strategies they employed during reading; during one session, think-aloud protocols were collected. Results indicated that children in the summarization training and the summarization with self-monitoring conditions outperformed the control group on all measures. Additionally, children in the self-monitoring condition did significantly better than did children in the summarization-only condition on some transfer measures.

McCurdy, Barry L., & Shapiro, Edward S. (1992, Summer). A comparison of teacher-, peer-, and self-monitoring with curriculum-based measurement in reading among students with learning disabilities. *Journal of Special Education, 26*, 162–180.

Investigates whether elementary pupils with mild learning handicaps can accurately collect curriculum-based assessment data and has pupils and teachers rate the acceptability of the three forms of progress monitoring examined: teacher monitoring, peer monitoring, and self-monitoring. Forty-three pupils from 10 elementary resource rooms participated. Ten were assigned to teacher monitoring, 10 to peer monitoring, 12 to self-monitoring, and 11 to no-monitoring conditions. Passages from the basal reading text made up the curriculum-based measurement for pre- and posttests and for twice weekly assessments. Children read selected passages for 1 minute. Median number of correct words per minute was computed. Teachers completed the Intervention Rating Profile–15 and pupils completed the Children's Intervention Rating Profile. Teacher, peer, and self-monitors were trained with similar procedures for administering and scoring the oral reading probe and graphing performance. When tapes of oral reading were analyzed, subjects showed comparable gains in oral reading. The teacher-monitoring condition provided the most consistent treatment effects, but pupils in the self-monitoring condition exceeded their baseline performance more frequently than pupils in other treatment conditions. Findings suggested that pupils in the self- and peer-monitoring conditions could collect reliable data.

Reynolds, Maynard C.; Heistad, David; Peterson, JoAnne; & Dehli, Rosalie. (1992, July–August). A study of days to learn. *Remedial and Special Education, 13*, 20–26.

Reports a method for monitoring rates of learning in reading and arithmetic in a continuous progress program in three elementary schools in a rural region of Minnesota. Days required to reach mastery in each unit of sequenced units of instruction were studied over a 5-year period. School days were numbered continuously through several grades. Pupils numbered each paper with the continuous date. By noting the day number on which each unit mastery exam was passed, researchers studied the days to learn of Chapter 1, special education, and noncategorized pupils. Compared to other pupils, pupils in the two categorized programs showed longer time to learn in units and steadily decreasing rates of progress through the curriculum in reading and arithmetic. The cumulative data indicated that pupils assigned at any time in the 5 years to either Chapter 1 or the LD program experienced relative difficulty in learning from the earliest days of the first grade. The researchers suggest that days to learn might be a useful measure for early identification of pupils who are not profiting from existing classroom programs and who might benefit from special help.

Fawcett, Angela J., & Nicolson, Roderick I. (1991, June–July). Vocabulary training for children with dyslexia. *Journal of Learning Disabilities, 24*, 379–383.

Investigates the effects of a vocabulary training program on dyslexic children. Specifically, the study examines the effect of frequency of instruction (high and low) and type of instruction (enriched and traditional) on vocabulary knowledge, lexical decision accuracy, and lexical decision speed both in the short term and the long term. In addition, the study addresses potential generalization to words not used in vocabulary training. Participants in the study were 13 adolescents with dyslexia who ranged from 11 to 14 years of age and reflected a "poor vocabulary" group (8 students) and a "good vocabulary" group (5 students), as measured by the British Picture Vocabulary Scale. Twenty-four difficult words were presented to subjects over a 6-week period using a counterbalanced within-subjects design. Subjects were pretested, immediately posttested, and posttested 6 months later on experimental tasks related to word knowledge, lexical decision accuracy, and lexical decision speed. A 2-factor ANOVA revealed a significant difference in test performance on the trained words, with good vocabulary students showing improvement from the pretest to the immediate and delayed posttests and poor vocabulary students showing no improvement. In addition, the good vocabulary group made significant gains in knowledge of the untrained words. Both groups demonstrated significant improvement in lexical decision accuracy and lexical decision speed for the trained words but not for the untrained words.

McGOVERN, NANCY. (1993, January). The reading of Bethany: A case study of an adolescent reader. *English Journal, 82*, 69–71.

Presents a case study of an adolescent female, Bethany, who experienced reading difficulties as a result of substance abuse and a series of emotional traumas. Events leading to Bethany's recovery from her various problems and to her reacquisition of reading skills are described. Bethany's views on the value of reading are also relayed.

ZAKALUK, BEVERLEY L., & KLASSEN, MARY. (1992, September). Enhancing the performance of a high school student labelled learning disabled. *Journal of Reading, 36*, 4–9.

Details the case study of a 9th grade student presented with an individualized remedial program to help him assume greater responsibility for his learning and reduce his dependence on a paraprofessional. The subject had been diagnosed as LD and had been in an oral program throughout middle school. Preassessments of his reading and learning abilities included the WJPEB, the Burns and Roe Informal Reading Inventory, informal language samples, the Slingerland Screening Tests for Identifying Children with Specific Learning Disabilities, and Schonell's Graded Word Spelling Test. Twelve sessions of remediation were presented by a resource specialist. Remediation emphasized (1) direct explicit instruction, which focused on making the purpose of the activity clear, and teacher modeling and demonstration with provision being made for practice and feedback; (2) metacognitive awareness, which stressed awareness of and strategic control over thinking and learning activities in order to meet task demands; and (3) the use of language to mediate thinking and learning. The GMRT pre- and postintervention scores together with the subject's grades on his first and second term report cards were used to estimate the effect of remediation. The student's standardized comprehension gains were not substantial, but gains in vocabulary were evident. There were no substantial differences in his grades from first to second term (with the exception of mathematics), but the student did maintain his final term marks without the assistance of the paraprofessional. He had learned to function independently and perceived himself as learner and reader.

CRANO, WILLIAM D., & JOHNSON, CHARLES D. (1991, Winter). Facilitating reading comprehension through spatial skills training. *Journal of Experimental Education, 59*, 113–127.

Tests whether perceptual skills training enhances the reading performance of 120 lower SES adolescent students (70 boys and 50 girls) whose reading comprehension performance was at least 3 years behind that of their same-aged peers on the GMRT. Subjects were assigned randomly to one of three experimental conditions in a 6-week remedial reading program: remedial reading instruction only; reading instruction plus spatial skills training (map/graph reading); and no treatment. Scores were analyzed by 3 (treatment) x 2 (sex) x 2 (pre–post reading measure) unweighted means ANOVA with repeated measures on the last factor. Significant differences favoring the spatially trained respondents over the other two groups were observed on almost all measures, including space relations and abstract reasoning skills as measured by the Differential Aptitude Tests and four aspects of skilled reading (speed, accuracy, vocabulary, and comprehension) as measured by the GMRT. Correlational analyses suggested that lower level reading skills influenced later gains in comprehension.

MEYERS, HOWARD H., & SCHKADE, LAWRENCE L. (1992, Summer). Sensory integration therapy revisited: The efficacy of the Belgau Board. *Reading Improvement, 29*, 120–129.

Scrutinizes the efficacy of the Belgau Board, a sensory integration approach to remediation of reading and other learning problems. Subjects were 79 culturally diverse students from six junior high school remedial reading classes. Subjects, who were all reading 2 years below level on the GMRT, were randomly assigned to a treatment group that received Belgau Board therapy or to a control group. A pretest-posttest experimental design was employed in which subjects' reading comprehension, oral reading speed, writing creativity, writing productivity, form reasoning, memory for symbolic units, memory for symbolic systems, visual discrimination, and psychomotor coordination were assessed. ANCOVA resulted in no significant differences between treatment and control groups or among ethnic groups on the nine measures administered.

THISTLETHWAITE, LINDA, & MASON, MYRON. (1993). Chapter 1 reading programs: Do student/family factors make a difference? *Reading Horizons, 33*, 258–277.

Attempts to isolate child and family characteristics that affect the child's achievement in Chapter 1 reading programs. Subjects were secured by asking teachers in eight different Chapter 1 programs to identify and complete questionnaires for the five pupils who had made the greatest gains in their program and for the five who had made the smallest gains or no gain at all. Gains were determined by using spring–spring test results on a reading comprehension subtest. Subjects included 38 children in the high-achieving group and 40 in the low-achieving group. Data were collected for 19 child and parent or family characteristics that might affect achievement, including pupil self-concept, risk-taking, effort, attitude toward reading, study habits, time management, and general organizational skills, interest in program, general health, vision, hearing, length of enrollment in Chapter 1 program, and number of times retained. In addition, number of parent-teacher contacts, parental attitude regarding pupil placement in the program, amount of parental help with homework, parental difficulty with learning to read or write, family socioeconomic background, and family constellation were noted. A two-tailed *t* test was used to compare the mean gains for males and females and the means of high and low achievers with respect to the 19 factors. Characteristics affecting achievement included ones that the teacher could possibly influence: child's self-concept, ability to take risks, effort, study habits, time management, and organizational skills, attitude about reading, and parents' attitude about the child's participating in the reading program. Characteristics not within a teacher's ability to influence were found to be ones that did not have a significant effect on achievement, such as health, vision, hearing, length of enrollment in Chapter 1, and level of attendance.

V-11 Teaching bilingual/other language learners

FEITELSON, DINA; GOLDSTEIN, ZAHAVA; IRAQI, JIHAD; & SHARE, DAVID L. (1993). Effects of listening to story reading on aspects of literacy acquisition in a diglossic situation. *Reading Research Quarterly*, *28*(1), 70–79.

Examines whether regular reading of stories in literary Arabic (FusHa) to Arab kindergartners familiarizes them with FusHa and what the effects are for children's literacy skills. Children in 12 Arab kindergarten classrooms (n = 258) listened to stories in FusHa read aloud daily for 5 months. Children in two control classes (n = 49) devoted the same time to a language development program. All were pretested with the Vocabulary Subtest of the Arabic version of the WISC-R. Posttest measures of listening comprehension and picture storytelling were administered to all children in the control group and a random sample of the experimental group. Using ANCOVA with pretest WISC-R vocabulary scores covaried, children in the experimental group scored significantly higher in listening comprehension and active use of language. In the picture-storytelling tasks, the experimental group outperformed the control group in specifying causal connections between story events, supplying meaningful story endings, demonstrating vocabulary on a type-token measure (children's use of different words in telling stories divided by their total number of words), and using a higher proportion of clauses. The researchers advise that children can acquire a second register through exposure in school without the language of home being stigmatized or abandoned.

GRABE, WILLIAM. (1991, Autumn). Current developments in second language reading research. *TESOL Quarterly*, *25*, 375–406.

Focuses on research conducted from 1980 through 1991 in second-language research and provides implications for instruction. In particular, attention is given to interactive approaches to reading and the differences between L1 and L2 reading. Five areas of current research are identified as being important for continuing investigation. These areas include schema theory, language skills and automaticity, vocabulary development, comprehension strategy training, and reading-writing relations.

SHIH, MAY. (1992, Summer). Beyond comprehension exercises in the ESL academic reading class. *TESOL Quarterly*, *26*, 289–318.

Reviews research on reading comprehension and study strategies important for reading academic texts and makes recommendations from the research for planning reading materials, tasks, and instruction for secondary and postsecondary programs for ESL students.

KUCER, STEPHEN B. (1992, May). Six bilingual Mexican-American students' and their teachers' interpretations of cloze literacy lessons. *Elementary School Journal*, *92*, 557–572.

Explores the differences in interpretation of cloze literacy lessons by six bilingual 3rd grade Mexican American pupils and their teacher over the course of 1 academic year. Modified cloze lessons—exact substitutions not required, single-word and multiple-word deletions, deletions at key points in text rather than at every *n*th word—were intended to teach students how to use context clues when encountering unknown words. Lessons were videotaped, all cloze exercises were collected, and both teacher and students were interviewed with four questions to determine the nature and purpose of the cloze activities. While pupils were able to use context clues in the activity with 93% accuracy and to describe the procedures they used, they were unable to understand the purpose behind the task, even after explicit statements by the teacher. Teacher-pupil congruence on response was 7%. Possible reasons for the misunderstanding of lesson purpose included lack of lesson authenticity to life experiences and to previous school experiences, and the task schema these pupils had already developed.

Luppescu, Stuart, & Day, Richard R. (1993, June). Reading, dictionaries and vocabulary learning. *Language Learning*, *43*, 263–287.

Observes the effects of bilingual dictionaries on vocabulary learning during reading. Subjects were 293 Japanese university students studying English as a foreign language. Subjects were randomly assigned by class to either a treatment group or a control group. Both groups were asked to read a short story containing 17 target words thought to be unknown or difficult to the readers, but which could be inferred by the context of the sentences in which they occurred. Students in the treatment group each had an English/Japanese dictionary which they could use freely to look up any words they were unsure of or wanted to check. Results of two-sample *t* tests indicated that dictionary users outperformed students in the control group on the vocabulary multiple-choice measure administered. Differential item functioning was evident, with some items being more difficult for dictionary users. Dictionary users took more time to read the story than their control group counterparts.

Frey, Jean; Smith, Terrie; Rogers, Corrine; Stevener, Mary Anne; & DiStefano, Sherry. (1991). Vocabulary concept development of students with differing English proficiencies. *Reading in Virginia*, *16*, 41–47.

Investigates two research questions: (1) What are the effects of strategy instruction focused on the semantic web and the Venn diagram on the vocabulary assimilation of 2nd, 3rd, and 5th grade ESL learners? (2) Will teacher-led practice in the use of a strategy result in student-initiated use of the strategy? Two intact 2nd, 3rd, and 5th grade classes participated in the study. Useable data were collected for 28 second graders, 14 third graders, and 15 fifth graders. At each grade level, one class received direct instruction in the use of the semantic web and the other received direct instruction in the use of the Venn diagram as a postreading and prewriting activity. Vocabulary assimilation was measured by comparing the lists of words generated by the class using either the semantic web or Venn diagram approach to words used by children in writing samples collected at three different times. At all grade levels, vocabulary assimilation was low. At the 2nd and 5th grade levels, children in the Venn diagram group incorporated more words into their writing than those in the semantic map group. With regard to pupil-initiated strategy use, a comparison of prewriting strategies used before and after treatment revealed an increase in the number of students using the strategy learned during treatment, regardless of strategy group. No tests of significance are reported.

Browne, Louis R. (1991, Summer). Strategies for improving the vocabulary and writing skills of minority group college students in biology classes. *Reading Improvement*, *28*, 104–107.

Describes three approaches to building vocabulary and two approaches to improving writing skills among students enrolled in general biology classes at a community college offering bilingual courses (English and Spanish). The sample was drawn from a population of nontraditional minority students who are often underprepared in reading, writing, and English language proficiency. Approximately 37% of the first-year students have general equivalency diplomas (GEDs), 84% are Hispanic, 12% are African American, and 75% are female. The three approaches used to build vocabulary were a root-affix method, the development of student-originated vocabulary lists, and special testing techniques. The two approaches used to enhance writing skills were the submission of biology laboratory reports and student journal writing during the last 10 minutes of the laboratory classes. Data analysis and results of these interventions are not described.

Reyes, Helene E. (1993, Summer). A reading program for bilingual students that works. *Illinois Reading Council Journal, 21*, 37–41.

Reports informal results of a 9-week program to help 7th grade bilingual and LEP students develop a higher level of comprehension, vocabulary, and background knowledge through published materials, free reading, retelling, journal writing, and art projects. Gains from pre- to posttest on the GMRT ranged from 1 month to 2 years, with 6.7 months being the average amount of growth. Sixty-two percent of bilingual and LEP pupils gained in test scores; 70% appeared to gain in self-image.

V-12 Tests and testing

(a) Factors in test performance

Barona, Andrés, & Pfeiffer, Steven I. (1992, June). Effects of test administration procedures and acculturation level on achievement scores. *Journal of Psychoeducational Assessment, 10*, 124–132.

Investigates the effects of a supportive group-testing procedure and ethnicity on achievement test scores and determines whether pupils' acculturation status plays a significant role in those scores. Subjects, 39 Anglo- and 94 Mexican American children in grades 4–6, completed the reading vocabulary subtest of the CAT under standardized and facilitative conditions. Pupils in the facilitative condition encouraged and provided support for one another, but did not share answers. Scores on the reading vocabulary test were correlated with the SOMPA acculturation scales to determine whether acculturation status was related to achievement. Mexican American children scored lower than Anglo-Americans in standardized administration but outperformed them in the facilitative condition. Anglo pupils' mean performance decreased significantly from the standard to the facilitative administration, whereas decline for Mexican American children was slight. SOMPA subtests did not correlate significantly with reading vocabulary scores under standardized administration, but scores on variables of socioeconomic status and family size correlated significantly with the facilitative scores. Data suggested that both groups of children should be administered achievement tests under standard procedures and that influences of sociocultural status on testing merit more study.

McAuliffe, Sheila. (1993, April). A study of the differences between instructional practice and test preparation. *Journal of Reading, 36*, 524–530.

Compares the strategies employed by 15 at-risk 8th grade readers when they are engaged in authentic literacy-learning tasks versus those employed as they practiced for a state-mandated test. Acting as a participant-observer across 25 observation periods, the researcher documented the planning and preparation, organization, roles of texts, teacher belief systems, purposes for language use, nature of comprehension, nature of student interactions, types of evaluation, and students' perception of the usefulness of instruction across both contexts. The researcher noted that when students were engaged with thematically linked literature selections, they reflected, recalled, supported their thinking with text, and made predictions. In contrast, when they practiced for the state test, the students demonstrated lower level comprehension and less integration of ideas. They verbally rejected the role of text as dispenser of information and the limitations on choice that predetermined answers demanded. The researcher suggests that test performance may not reflect what is possible with theory-based instruction and makes recommendations for more authentic models of assessment.

(b) Predictive studies

CUNNINGHAM, ANNE E., & STANOVICH, KEITH E. (1991, June). Tracking the unique effects of print exposure in children: Associations with vocabulary, general knowledge, and spelling. *Journal of Educational Psychology, 83*, 264–274.

Studies the relation between print exposure—as measured by the recently developed Title Recognition Test (TRT)—and spelling, vocabulary, verbal fluency, word knowledge, and general knowledge. Thirty-four 4th graders, 33 5th graders, and 67 6th graders enrolled in a lower–middle-class school in California made up the sample. Students were given the RPM, a phonological coding task, a spelling task, a word checklist as a measure of reading vocabulary, a verbal fluency task, the PPVT, the general information subtest of the PIAT, and the TRT. Results indicate a significant correlation coefficient between the TRT and each of the other measures in the study as well as CA in months. A series of hierarchical regression analyses were conducted for each grade level in order to determine the strength of the TRT as an independent predictor of the criterion variables after partialling out age and nonverbal intelligence, as measured by performance on the RPM. The TRT was significantly related to the residual variance in each of the criterion variables. The results of a second series of hierarchical regression analyses in which performance on the phonological coding task was entered prior to performance on the TRT confirmed that the TRT was a significant and unique predictor of all five criterion variables.

FUCHS, LYNN S., & DENO, STANLEY L. (1992, December). Effects of curriculum within curriculum-based measurement. *Exceptional Children, 58*, 232–243.

Investigates the effects of curriculum differences on the technical features of curriculum-based measurement (CBM) in reading. Curriculum was defined in two ways: difficulty of material, and the basal series from which pupils read. Technical features were the criterion validity and developmental growth rates associated with the measurement. Subjects were 91 elementary school children in grades 1–6, 15 of whom were classified as LD and 23 of whom were enrolled in Chapter 1 programs. Children were individually administered the Passage Comprehension (PC) test of the Woodcock Reading Mastery Tests and, as a CBM, reading passages from two basal series. Children read orally for 1 minute from each of 19 passages, one from each grade level of the two reading series. Coefficients of correlation between the oral reading samples and the PC were similar across difficulty levels and across series. Developmental growth rates at all levels remained strong, regardless of difficulty level and series.

BERNINGER, VIRGINIA; HART, TERESA; ABBOTT, ROBERT; & KAROVSKY, PENELOPE. (1992, Spring). Defining reading and writing disabilities with and without IQ: A flexible, developmental perspective. *Learning Disabilities Quarterly, 15*, 103–118.

Compares three approaches to defining "disabilities" on predictor development measures shown to be related to criterion measures of reading and writing. The approaches were compared with an unreferred sample of 300 1st, 2nd, and 3rd graders (50 boys and 50 girls from each grade). Predictor measures included alphabet tasks; finger succession tasks, visual-motor integration; phonetic/semantic coding; syllabic and phonemic coding; and whole-word, letter, and letter-cluster orthographic coding. For each measure, children who fell in the lowest 5% of the normal distribution were assigned to the low-functioning group; those children who were significantly below their verbal IQ based on the Mahalanobis statistic (which considers the bidirectional influence of IQ and developmental skill) were assigned to the underachieving group; children who met the criterion for both underachieving and low-functioning were assigned to the LD group. Criterion measures included subtests of the WRMT-R as well as tests of handwriting and spelling (from the WRAT), narrative and expository compositions, and verbal IQ (from the WISC-R). Of the low-functioning group, 44% were LD (that is, they were also discrepant from their verbal IQ); of the underachievers, 36% were LD. Thus, elimination of IQ in the definition of learning disabilities dramatically affected identification of the LD children. The researchers recommend a two-stage assessment model in which absolute criteria without IQ are first used by classroom teachers to identify children who are low functioning and could benefit from early intervention and relative criteria with IQ used subsequently in more comprehensive psychoeducational assessments for children with learning disabilities whose problems persist despite early intervention.

KENNY, DIANA T., & CHEKALUK, EUGENE. (1993, April). Early reading performance: A comparison of teacher-based and test-based assessments. *Journal of Learning Disabilities, 26*, 227–235.

Compares the effectiveness of three screening measures for identifying children at risk of educational failure: a single teacher rating that categorizes children into three levels of reading ability (advanced, average, and poor); a 15-item teacher questionnaire to measure cognitive and language ability, attentional and behavioral characteristics, and academic performance; and a battery of language and reading tests that predict or correlate with reading failure. Subjects, 312 Australian children from kindergarten, year 1, and year 2 of representative socioeconomic status and ethnicity, were assessed after 1, 2, or 3 years of schooling. All were assessed with a series of tests measuring phonological, language, reading, and memory skills. Sixty-three teachers completed the 15-item scale on all pupils and then rated them as advanced, average, or poor readers. Teacher questionnaire scores and teacher category ratings had substantial concurrent validity with each other and with the battery of tests. Different skills assumed greater or lesser importance as the pupils progressed in grade and reading ability. The teacher questionnaire was the best overall predictor of children at risk for all 3 years, suggesting that carefully focused teacher rating scales may be a cost-effective measure for identifying children at risk of reading failure.

WELLER, L. DAVID; SCHNITTJER, CARL J.; & TUTEN, BERTHA A. (1992, Spring–Summer). Predicting achievement in grades three through ten using the Metropolitan Readiness Test. *Journal of Research in Childhood Education, 6*, 121–130.

Determines the strength of the MRT administered to entering 1st graders in predicting their mathematics and reading achievement in grades 3, 6, 9, and 10. Subjects were 415 pupils who entered 1st grade in 1976 and received all 12 years of their education in one large urban school district. Predictors evaluated in relation to and in conjunction with one another were the MRT; IQ as measured on the Test of Cognitive Ability; age at school entry; provision of remediation; and several demographic variables including SES, race, and sex. Dependent variables were the subjects' CTBS scores in mathematics and reading for grades 3, 6, and 9, and the Georgia Basic Skills Test scores in mathematics and reading in grade 10. Correlation and stepwise regression analyses revealed the MRT to be a strong competitor to IQ in predicting academic performance through grade 10. Support for using the MRT in making early decisions regarding readiness or remediation is provided.

PREWETT, PETER N., & GIANNULI, MARIA M. (1991, December). Correlations of the WISC-R, Stanford-Binet Intelligence Scale (fourth edition), and the reading subtests of three popular achievement tests. *Psychological Reports, 69*, 1232–1234.

Presents correlation coefficients between the WISC-R and the Stanford-Binet Intelligence Scale and the reading scores of three achievement tests: the Woodcock-Johnson Tests of Achievement–Revised; the Kaufman Test of Educational Achievement-Comprehensive Form, and the PIAT-Revised. Subjects were 66 pupils, average age 9-7 whose scores yielded the WISC-R coefficients, and 48 pupils, average age of 7-0, whose scores on the Stanford-Binet were correlated. Pearson coefficients between the reading subtests and the intelligence tests were calculated. To determine whether reading subtests correlated similarly with the WISC-R verbal and performance scores, *t* tests comparing differences between correlations from a dependent sample were calculated. A moderate relation was found between the two intelligence tests and the reading subtests of the Woodcock-Johnson, Kaufman, and Peabody achievement tests. Each of the reading subtests correlated significantly higher with the verbal than with the performance IQs on the WISC-R.

(c) Cloze testing

PARKER, RICHARD; HASBROUCK, JAN E.; & TINDAL, GERALD. (1992, Summer). The maze as a classroom-based reading measure: Construction methods, reliability, and validity. *Journal of Special Education*, *26*, 195–218.

Reviews past research on the maze procedure, beginning with the first studies in the 1970s and moving forward to current interest in using maze to measure the reading needs of students with reading and learning disabilities. Reviews focus on construction, administration, and scoring procedures and highlight problems with past studies of maze procedures. Areas receiving specific attention include reliability of three types—test-retest, alternate form, and internal consistency—and the validity of using maze scores as placement indicators, particularly in terms of standardized tests, teacher judgment, and reading group placement. Data suggest the need to revise maze formats to obtain minimum construct validity. More attention needs to be directed to alternate form reliability in maze research and to developing alternate form reliability with content and construct validity. There is a need to study revised maze assessments in real school conditions.

ABRAHAM, ROBERTA G., & CHAPELLE, CAROL A. (1992, Winter). The meaning of cloze test scores: An item difficulty perspective. *Modern Language Journal*, *76*, 468–479.

Investigates intrinsic and extrinsic factors related to item difficulty on three types of cloze tests. Subjects were 178 international students enrolled in ESL composition courses. They were administered one of three cloze-type tests, constructed from a single text to control for passage difficulty: (1) a fixed-ratio cloze constructed by deleting every 11th word after two initial intact sentences; (2) a rational fill-in cloze in which each deleted word had identifiable clues within the passage as well as an association with information outside the sentence in which it occurred; or (3) a rational multiple-choice cloze which provided four response choices for each deletion. Eight intrinsic factors were examined for their effect on item performance: (1) location of context clue, (2) number of syllables in the sentence, (3) number of occurrences of the correct answer in the text, (4) content versus function word, (5) length of word to be retrieved, (6) number of possible answers, (7) number of possible forms to be considered, and (8) type of response. An extrinsic factor examined for its effect on item performance was subjects' extent of field independence as measured on the Group Embedded Figures Test. Statistical analyses applied to the data indicated that different combinations of factors related to item difficulty for each type of cloze test.

GOLDMAN, SUSAN R., & MURRAY, JOHN D. (1992, December). Knowledge of connectors as cohesion devices in text: A comparative study of native-English and English-as-a-second-language speakers. *Journal of Educational Psychology*, *84*, 504–519.

Examines how college readers of different levels of English proficiency understand and use logical connectors and understand the meaning relations signaled by them. Connector types studied were additive relations, causal relations, adversative relations, and sequential relations. Readers were presented with passages in which there were blanks for which they had to select the best connector from among a set of four alternatives. Experiment 1 compared cloze tasks and verbal justification performance of native-English-speaking and ESL university-level subjects. Experiment 2 tested native-English-speaking community college students, examining whether confidence in cloze selections varied according to the connector type tested. Experiment 3 tested a sample of community college ESL students who completed the cloze task and provided confidence ratings and verbal justifications for their selections. ESL university students correctly completed fewer cloze slots than did native-English-speaking students. Community college ESL speakers performed at lower levels than did university ESL speakers. Pattern of difficulty for the four connector types was consistent across proficiency groups. Students were more correct with additive or causal items than with adversative or sequential items. Analysis of incorrect responses suggested a tendency to overattribute causal relations.

(d) Test uses and purposes

HASBROUCK, JAN E., & TINDAL, GERALD. (1992, Spring). Curriculum-based oral reading fluency norms for students in grades 2 through 5. *Teaching Exceptional Children, 24*, 41–44.

Presents new norms for oral reading fluency (ORF). Data were collected during 1981 to 1990 from 7,000 to 9,000 pupils in grades 2 through 5 in five midwestern and western U.S. states. All districts followed similar data-collection procedures. A 1-minute timed sampling was collected from at least two passages selected from basal readers used in the classrooms. Children read passages from their grade level text, regardless of their instructional placement. Pupils from remedial or compensatory and special education programs were included in the sample in proportions equivalent to their numbers in average school districts. Included were a large urban district, racially mixed suburban and small city districts, and a rural cooperative district. All districts provided reading instruction primarily from basal materials. A table with fall, winter, and spring ORF norms is provided and includes words correct per minute at the 25th, 50th, and 75th percentiles for each grade level.

MURPHY, PEGGY W.; DAVIS, TERRY C.; LONG, SANDRA W.; JACKSON, ROBERT H.; & DECKER, BARBARA C. (1993, October). Rapid estimate of adult literacy in medicine (REALM): A quick reading test for patients. *Journal of Reading, 37*, 124–130.

Describes the development and testing of REALM, a 66-item word-recognition test that measures ability to pronounce common medical words and lay terms for body parts and illnesses. The test can be used by health personnel to gain an estimate of reading ability of adult patients visiting health clinics, so that any written materials and instructions given can be adjusted according to patients' needs.

(e) Test reliability and validity

FARR, ROGER, & JONGSMA, EUGENE. (1993, Winter). The convergent/discriminant validity of integrated reading/writing assessment. *Journal of Research and Development in Education, 26*, 83–91.

Determines the convergent and discriminant validity of three components of an integrated reading-writing assessment. Components of the assessment were response to reading, command of language, and management of content. The sample for the study was drawn from eight school districts across seven U.S. states and included 5,267 children in grades 1-8. Pupils were given a writing prompt based on a reading assignment and were asked to develop a written response to the final draft stage. Trained raters analyzed the written responses and scored each child's performance on each component using a 4-point scale defined by a general scoring rubric for each component. Correlation coefficients among the three components were arrived at through multitrait, multimethod procedures. Results yielded strong evidence for the convergent-discriminant validity of an integrated reading-writing assessment.

CARVER, RONALD P. (1992). What do standardized tests of reading comprehension measure in terms of efficiency, accuracy, and rate? *Reading Research Quarterly, 27*, 347–359.

Studies frequently used standardized tests of reading comprehension to determine what they measure in terms of efficiency, accuracy, and rate. Tests (ITBS, NDRT, DRP, Accuracy Level Test, Rate Level Test, Reading Efficiency Level Battery, and Rauding Efficiency Level Test) were administered to 354 children in grades 3–8 who were above average in reading ability and to 64 college students enrolled in college reading and study skills courses. Principal components analyses of data were employed. Initial factor analysis of each standardized test resulted in one or two factors, an efficiency level when there was one factor and an accuracy level factor and a late level factor when there were two. After analysis, each of the tests was determined to have its highest loading on the factor that the variable was predicted to be measuring. Results suggest that the ITBS measures efficiency level and accuracy level well, but not rate level; the NDRT measures all three factors but measures accuracy level best; and the DRP measures accuracy level best but also measures rate and efficiency levels, even though the test does not purport to reflect rate. The most important factor in tests measuring reading comprehension or general reading ability is efficiency level, which is highly influenced by rate.

COMMEYRAS, MICHELLE; OSBORN, JEAN; & BRUCE, BERTRAM. (1992). The reactions of educators to the framework for the 1992 NAEP for reading. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 137–152). Chicago, IL: National Reading Conference.

Surveys reading professionals regarding current trends in reading instruction and innovations in assessment. The questionnaire focused on responses to a recommended framework for reading in relation to the proposed 1992 National Assessment of Educational Progress reading assessment. The survey was sent to 700 randomly selected educators and contained a two-page cover letter explaining the 1992 NAEP plan as well as the recommended framework. The returned responses (N = 308) included elementary and secondary teachers (30%), college students (30%), and reading coordinators or supervisors (22%). The majority of respondents had 15 years' or more experience in education (70%) and considered reading their specialization (76%). Survey results indicated that there is a consensus in respondents' views of reading and the design of the NAEP test. Over all, respondents approved of the inclusion of open-ended responses, the use of authentic texts, and more attention to the reading process. In addition, concerns about scoring student writing, for literacy texts and personal response items, were frequently reported. There was stronger support for assessing efferent reading than aesthetic reading.

TEDICK, DIANE J.; BERNHARDT, ELIZABETH B.; & DEVILLE, CRAIG. (1991, Fall). Interpreting essay examination topics used for assessing content knowledge: Differences among test makers, test raters, and test takers. *Journal of College Reading and Learning, 24*, 63–79.

Reports a study intended to (1) examine test makers', takers', and raters' interpretations of the difficulty, planning time, and response time necessary for essay topics given to assess content knowledge in a course; and to determine whether any differences in initial interpretations among the groups influence the subsequent scores on the test takers' written responses. Fifty-nine secondary education majors (the test takers) and four test raters completed a questionnaire asking them to evaluate the topics as if they were appearing on a final exam in the reading course they were taking. All topics focused on the construct of schema, both the theoretical aspects and the practical applications. One week later, 23 test takers wrote on assigned topics from the questionnaire as though they were writing their final examinations in their course. One semester later, test takers' essays were given to four raters who were to predict from the written essays which topics the subjects had been assigned and then to score the essays as though they were grading a final course exam. Test takers' responses and test raters' interpretations were given to an independent reader who (1) decided whether test takers' prior interpretation of the assigned topic matched the content of the essay they wrote, and judged the test takers' interpretation matched the interpretations provided by the four raters. Test makers, raters, and takers produced similar interpretations on two and dissimilar interpretations on three of the topics tested. Differences in interpretation did not influence the test takers' scores.

CLARK, HENRY T., III, & FETSCO, THOMAS G. (1992, Summer). Assessing the stability of recommended reading method interventions from the reading styles inventory with third grade students. *Reading Improvement, 29*, 101–109.

Assesses the stability of the recommended reading methods and interventions derived from the Carbo Reading Styles Inventory (RSI). Subjects were 34 3rd grade pupils (15 boys and 19 girls) from two classrooms, one urban and the other rural/suburban, in the southwestern United States. Both classes were heterogeneously grouped. A 6-week test-retest reliability design was used, with subjects administered the RSI on two occasions. Methods considered for recommendation by the RSI included language experience, whole word, individualized, phonics, Carbo Recorded Book, Fernald, and the Orton–Gillingham. Chi-square analysis revealed a significant relation between ratings at Time 1 and Time 2. However, considerable instability was observed across the two administrations for both the reading methods and the recommended adjustments for implementing them. It is posited that reading styles may not be stable, or the RSI may not be able to detect stable aspects of reading styles.

GARRISON, WAYNE; DOWALIBY, FRED; & LONG, GARY. (1992, March). Reading comprehension test item difficulty as a function of cognitive processing variables. *American Annals of the Deaf, 137*, 22–30.

Identifies and examines item characteristics contributing to the difficulty of Form Z of the CAT reading comprehension test. Aspects studied included test format and item presentation, vocabulary and syntactic features, and procedural and world knowledge requirements. Contributions of these components to task difficulty were evaluated using linear regression methodologies. Variation in item difficulty was accounted for by a small number of predictor variables including the number of words in the combined text and stem, use of short-cut visual matching strategies, and prior knowledge. Subjects were deaf examinees enrolled at a technical school for the deaf. Implications for construct validity and test score interpretation are discussed.

MEREDITH, KEITH E.; MITCHELL, JUDY NICHOLS; & HERNANDEZ-MILLER, MIRTHA E. (1992). Psychometric properties of the reader retelling profile: A case study. In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 129–136). Chicago, IL: National Reading Conference.

Tests the reliability and validity of the Reader Retelling Profile as a method for evaluating oral or written retellings of narrative or expository texts. The subtest areas are text-based comprehension, reader response, and language use. Items are scored on a 4-point rating scale representing the degree of performance (no performance to high performance). The profile was administered to 162 school-aged children from 5th and 6th grade classrooms in two schools. Retelling scores from 51 pupils were used for the assessment of training effects while the remaining 111 responses were used for assessment of factor structures and for correlational studies with other reading related constructs (ITBS and Illinois Goal Assessment Program). Psychometric properties discussed were effects of training, interjudge reliability including correlation and agreement, internal consistency, factor structure, and validity. The profile appears to be a valid and reliable performance measure useful as an alternative authentic assessment.

HENK, WILLIAM A., & MELNICK, STEVEN A. (1992). The initial development of a scale to measure "perception of self as reader." In Charles K. Kinzer & Donald J. Leu (Eds.), *Literacy research, theory, and practice: Views from many perspectives* (pp. 111–118). Chicago, IL: National Reading Conference.

Develops a functional scale that would measure self-efficacy perceptions in reading. The sample consisted of 625 subjects from 26 classrooms, grades 4 through 6, in two school districts. The Reader Self-Perception Scale (RSPS) consists of 55 items across four subtests: performance, observational comparison, social feedback, and physiological states. Responses are given using a 5-point Likert scale (strongly agree to strongly disagree). Subjects were also administered the Elementary Reading Attitude Survey, an affective comparison test. Reading achievement data (ITBS or SAT) and the mandated Test of Essential Learning and Language Skills were obtained also. Pearson product-moment coefficients between RSPS subtests and the attitude measure, the standardized achievement scores, and the mandated test were calculated. Reliability estimates for the subscales of the RSPS were found acceptable, ranging from mid-.70s to high .80s. The highest and lowest reliability coefficients were .87 and .74 for performance and observational comparison, respectively.

(f) Alternative testing

PARIS, SCOTT G.; CALFEE, ROBERT C.; FILBY, NIKOLA; HIEBERT, ELFRIEDA H.; PEARSON, P. DAVID; VALENCIA, SHEILA W.; & WOLF, KENNETH P. (1992, October). A framework for authentic literacy assessment. *The Reading Teacher*, *46*, 88–98.

Reports the development and initial testing of a five-phase assessment framework adaptable for any district or state that is revising or creating alternative assessments of educational progress. Phases of the framework include identifying dimensions of literacy, identifying attributes of literacy dimensions, collecting evidence about literacy proficiency, scoring students' work samples, and interpreting and using the data. Examples using work samples from a pilot project in one district are used to illustrate how the framework can yield reliable and informative measures of differences among students.

HIEBERT, ELFRIEDA H.; HUTCHISON, TERRY A.; & RAINES, PEGGY A. (1991). Alternative assessments of literacy: Teachers' actions and parents' reactions. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 97–104). Chicago, IL: National Reading Conference.

Describes teachers' use of alternative assessment and parents' view of that assessment. Subjects were two teacher volunteers (2nd and 4th grades) and six sets of parents from a suburban school district that had begun eliminating all standardized testing in the early elementary grades. Interviews focusing on the nature of assessment and its relation to instruction were conducted with teachers and parents. Subsequent observations were made of classroom instruction and parent-teacher conferences. Other sources of information included portfolios and teacher assessment forms. While similar opportunities for use of these sources existed in the two classrooms, the teachers used the information they yielded differently. The 2nd grade teacher analyzed portfolio materials to ascertain particular dimensions of growth. The 4th grade teacher concentrated on completion of portfolio contents. Parents of 4th graders were more aware of concerns about standardized testing than were parents of 2nd graders. Differences in the nature of portfolios are discussed.

LASLETT, ALAN. (1991, December). Literacy assessment and public accountability. *English in Australia, 98*, 21–47.

Reviews past reports and studies on literacy and literacy teaching—with particular emphasis on reports and programs in Australia—before giving an overview of the Writing and Reading Assessment Program (WRAP) initiated in South Australia in 1989. WRAP, a 3-year assessment program, surveyed literacy performance through a series of procedures and classroom-based tasks administered by hundreds of teachers to their students. Data were analyzed by approximately 60 WRAP teacher analyzers. Among the questions asked were these: What is the range of students' literacy experiences in the various areas of study? How well do students write and read in a range of tasks and on a variety of topics? What processes or strategies do they use in reading and writing? What are students' attitudes to reading and writing and their perceptions of themselves as readers and writers? Procedures for collecting data to answer these questions are described. Initial answers to these questions are reported, with reference made to the full document report. Brief recommendations growing out of the data are included.

MULLIS, INA V.S. (1992, Summer). Developing the NAEP content-area frameworks and innovative assessment methods in the 1992 assessments of mathematics, reading, and writing. *Journal of Educational Measurement, 29*, 111–131.

Provides an overview of the process for developing the frameworks underlying the National Assessment of Educational Progress (NAEP), with emphasis on the 1990 and 1992 assessments of mathematics and reading and the 1994 assessment of science. In addition, innovative assessment techniques included in the 1992 assessment of mathematics, reading, and writing are described, including use of mathematics tools, oral interviews, and portfolio assessment. The Reading Framework for the 1992 NAEP took the form of a 4 x 3 matrix of reading skills and strategies by reading purposes. The skills and strategies included initial understanding, developing and interpretation, personal reflection and response, and demonstrating a critical stance. The global purposes were defined as reading for literary experience, reading for information, and reading for performance of a task. The National Assessment Governing Bond, a steering committee representing 16 U.S. organizations, and a planning committee of reading educators and specialists guided, reviewed, identified objectives, and prepared descriptions. Innovations in the 1992 reading assessment included longer passages that represented materials students typically encounter and that resembled their original forms as closely as possible. Questions included paper-and-pencil tasks in which students interpreted, reflected on, and evaluated materials. At grades 8 and 12, students selected from short stories reflecting multicultural diversity, and at grade 4, an Integrated Reading Performance Record provided for in-depth interviews about literacy with a representative subsample.

DEWITZ, PETER; CARR, EILEEN M.; PALM, KAREN N.; & SPENCER, MARTHA. (1992). The validity and utility of portfolio assessment. In Charles K. Kinzer & Donald J. Leu (Eds.), Literacy research, theory, and practice: *Views from many perspectives* (pp. 153–160). Chicago, IL: National Reading Conference.

Ascertains whether 25 1st and 2nd grade teachers found the portfolio process valuable and compares their assessment of word recognition, fluency, and comprehension through the use of portfolios with data provided by an IRI. The subjects were from five rural and three suburban elementary schools. The teachers had an average of 11 years of teaching experience and were participating in a year-long project to improve reading and writing instruction through a literature-based approach. Two separate evaluations were conducted to determine the effectiveness of the portfolio system: one on the validity of the teachers' judgments and the other on their attitudes and beliefs towards the utility of portfolios. The performance on the Qualitative Reading Inventory (QRI) of six children from one classroom in each building was used to compare with the judgments made by the teachers through portfolios. Attitudes and beliefs were determined through the Theoretical Orientation to Reading Profile and interviews. Most of the teachers reported that by the end of the year, portfolios were a regular part of their classroom routine. A wide sample of children's writing, journals, and responses to reading were included in the portfolios. Less frequently included were observational notes and results from conferences. Portfolios were found more useful for the assessment of writing than they were for reading. Teachers reported that individual conferences and observations were more valuable for assessing growth in reading than writing. Teachers felt less skillful in using writing samples to evaluate comprehension. There were no significant differences found between individual judgments made by teachers and the results of the QRI in the word recognition and fluency. There was a difference in the area of comprehension in that the story retellings (part of QRI) illustrated less pupil ability than was reported by teachers.

MORAWSKI, CYNTHIA M. (1992, Summer). The "Reading and Writing Family Constellation Disclosure": Applications in holistic assessment and remediation. *Reading Improvement, 29,* 82–93.

Reports on the development of the "Reading and Writing Family Constellation Disclosure" (RWFCD) and its use in the assessment and remediation of students with reading and writing difficulties. Presented is a case study of one 15-year-old male who had demonstrated persistent and significant underachievement in reading and writing during his elementary and junior high school years. The case study illustrates the effectiveness of the RWFCD in holistic assessment and planning for remediation.

SCHARER, PATRICIA L. (1992). Tensions between numbers and knowing: A study of changes in assessment during implementation of literature-based reading instruction. In Nancy D. Padak; Timothy V. Rasinski; & John Logan (Eds.), *Literacy research and practice: Foundations for the year 2000* (pp. 3–13). Provo, UT: College Reading Association.

Describes patterns of change in assessment during implementation of literature-based reading instruction. Five elementary teachers volunteered to participate in this study. A 5-year plan was developed by the school to establish a literature-based reading program.

Data presented were taken during the 3rd year and were collected through a series of interviews (five per teacher), observations (six per teacher), and group discussions (ten meetings). Approximately 25% of the data collected were coded as related to assessment. Changes in assessment tools observed during the school year are discussed as well as teachers' responses to these, including the using of reader response activities, changing evaluation criteria, and moving from text-driven to child-driven instruction based on alternative assessment techniques. Experiences of two teachers are highlighted to illustrate alternative instructional and assessment practices such as running records and observations.

V-13 Technology and reading instruction

Askov, Eunice N., & Means, Tammy Sue Babe. (1993, May). A state survey of computer usage in adult literacy programs. *Journal of Reading*, *36*, 658–659.

Offers the results of a survey conducted by the Institute for the Study of Adult Literacy and designed to determine the prevalence of the use of technology—specifically computers—in adult literacy programs. State departments of education in the United States (including Guam, Puerto Rico, and the District of Columbia) were surveyed. The return rate was approximately 45% (n = 24). Results showed that the most frequently used technologies were print materials (24), computers (24), blackboard (22), overhead projectors (21), videotapes (21), and television (20). Adult students reportedly used computers primarily to learn new material at their own pace (20). Paper-and-pencil activities (15) as well as evaluation and testing (14) were also reported as part of learning new material by computer. Respondents also reported the use of computers for practice and reinforcement (22). Funding for the purchase of computers appeared to be problematic, and lack of direct funding was cited as the greatest barrier to their use. Almost all thought the most effective use of computers was for instruction (22). On an attitude scale, most respondents marked extremely positive attitudes toward the computer as a useful instructional tool.

Olson, Kerry, & Sulzby, Elizabeth. (1991). The computer as a social/physical environment in emergent literacy. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 111–118). Chicago, IL: National Reading Conference.

Observes how children at differing levels of literacy approached writing at the computer. Two school districts at different stages (3rd year and 2nd year, respectively) of a 5-year longitudinal project were used in this study. Data reported came from seven kindergarten and 1st grade classrooms where computer activities were integrated into the curriculum. Individual reading and writing samples prepared with and without the computer were collected in addition to full-day observations, teacher interviews, and informal feedback during weekly visits. Preliminary evidence suggested that children can and do use computers for composing, rereading, and sharing. Children moved through an exploratory phase initially, but once this stage passed, writing patterns at the computer were often similar to writing patterns observed with pencil and paper. However, physical characteristics of the computer led to increases in rereading and revising and encouraged practice in letter identification. The social context surrounding the computer facilitated more collaborative writing and an increase in interest in others' writing.

Reid, Ethna R. (1992, Fall). KRS: Computer-assisted reading instruction. *Contemporary Issues in Reading*, *8*, 63-72.

Summarizes the results of a series of studies testing the effectiveness of Keyboarding, Reading, Spelling (KRS), a software program designed to teach children to read and spell as they learn to use a microcomputer keyboard. Reported studies were conducted with subjects in regular classrooms, resource rooms, and Chapter 1 programs at grades 1 to 6. Dependent variables were reading and language subtests of the CAT, GMRT, and MAT, number of correct strokes per minute (keyboarding variable), and a researcher-developed, 20-item instrument designed to assess computer operations. Analyses revealed significant growth in reading and language for all of the treatment groups on the criterion measures applied. One analysis revealed that the mean gain for the treatment groups was at least twice that for nontreatment pupils in each of 12 comparisons. KRS subjects also showed significant growth on keyboarding and computer operation variables.

WRIGHT, ANNA; READ, PAULINE; & ANDERSON, MIKE. (1992, May). Contrasting computer input devices for teaching children with severe learning difficulties to read. *British Journal of Educational Technology, 23*, 106–112.

Compares the effects of a concept keyboard and a touch screen on the word-learning performance of LD children. Subjects were 16 pupils with a basic sight vocabulary of at least 10 words who attended a school for children with severe learning difficulties. Two experiments were designed, and eight subjects participated in each. The first experiment investigated the effectiveness of computer-assisted learning (CAL) systems by varying the complexity of the CAL system. The more complex system involved the use of a concept keyboard; the simpler system used a touch screen. The second experiment applied a training study to examine which of the two systems was more effective in helping pupils acquire new words. Dependent measures in the two studies were the number of words correctly identified by subjects. Effects were analyzed using MANOVA and ANOVA procedures. Results revealed no significant differences between systems on pupils' word-learning performance.

EVANS, PETER; FALCONER, LLOY; GROVES, JOCELYN; RUBIN, DANIEL; & MATHER, DAVID. (1992, March). An evaluation of the IBM Principle of Alphabet Literacy Systems (pals). *Alberta Journal of Educational Research, 38*, 3–8.

Reports an evaluation of an IBM literacy program with a wide range of adult volunteers in Canada. The program is marketed under the trade name of PALS (Principle of Alphabet Literacy System) and was designed to develop reading and writing skills for users functioning below 6th grade level. In PALS, the computer serves as the primary medium of instruction, and teachers act as facilitators for the learning process. A total of 27 adults, ranging in age from mid-teens to mid-60s and representing a broad ethnic and educational mix, completed the program. Two certified teachers served as facilitators. Subjects participated in 100 hours of instruction spread over 20 weeks. Separate forms of the WRMT served as pre- and postmeasures of reading skills. In addition, the evaluators conducted interviews with subjects to determine their qualitative reactions to the content and administration of the PALS program. Paired *t*-test comparisons showed significant progress across reading levels at which subjects worked. Overall, students who began at grades 1 and 2 showed the smallest increase as well as the least variation in individual improvement; the groups that began the program at grade levels 3 to 5 and 5 to 7 showed greater improvement. In general, large reading gains were made by those subjects strong in sound-based word-attack strategies. Participants were unanimous in their approval of the nonstressful, self-paced learning provided by the computer and were pleased with the ready availability of assistance.

ASKOV, EUNICE N., & SHEAFFER, BERNICE P. (1992). Assessing job-related basic skills: Job trails as an example. In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 85–92). Athens, GA: American Reading Forum.

Field tests a basic skills assessment program that combines functional context literacy with technology for reading grade levels 4 through 8. The computer assessment addresses job-related basic skills in five job domains and targets adults who have entry-level positions. The questions resemble tasks to be completed on the job but also measure basic workplace competencies associated with adult education curricula. The program was piloted in 14 agencies across 22 sites and included 79 adults. The program was used successfully in a variety of adult education programs; however, the computer operations had to be kept simple for instructors to use the program. The program was found to be more successful in programs that used it as a scheduled part of instruction instead of as supplemental material.

BROWN, EMORY, & ASKOV, EUNICE N. (1992). Evaluation of statewide workplace literacy computer-assisted instruction for commercial drivers. In Bernard L. Hayes & Kay Camperell (Eds.), *Developing lifelong readers: Policies, procedures, and programs* (pp. 137–144). Athens, GA: American Reading Forum.

Reports on the evaluation of the statewide delivery of a field-tested educational program to improve reading skills of commercial drivers. Approximately 2,400 drivers with a range of literacy levels were provided instruction for 2 to 126 hours with an average of 20 hours. One of every six drivers was female and drove a schoolbus. Most drivers were white. Classes were held at 52 Department of Transportation (DOT) sites across six regions in one U.S. state. Pre- and posttests were administered upon entry to and exit from the program and included basic skills checklists and an attitude survey. Teachers kept diaries and interviews were held with randomly selected participants. The job-specific instructional materials, including computer software and print study materials, effectively increased their abilities to comprehend the manual and pass the required DOT exam. Special efforts were needed to motivate low-level readers to participate. Implications focus on how to better measure student growth given the open-entry policy of the program and the inconsistencies in class participation by some drivers.

V-14 Research design

GUZZETTI, BARBARA J.; SNYDER, TONJA E.; GLASS, GENE V.; & GAMAS, WARREN S. (1993). Promoting conceptual change in science: A comparative meta-analysis of instructional interventions from reading education and science education. *Reading Research Quarterly, 28*(2), 117–159.

Uses a meta-analytic perspective to examine and synthesize the research in reading and science education designed to overcome misconceptions in science. A total of 23 studies conducted by reading researchers and 47 studies from science education were identified as meeting the criteria for the analysis. Each area was analyzed separately first and then comparisons were made between areas. Frequency counts of the reading studies showed that two-thirds had been done during the period of 1989-1991, with almost all having been conducted in the United States at either the undergraduate or the elementary level. A high design quality rating was given to 61% of the studies. The most effective strategy was the activation of prior knowledge supplemented by refutation of a misconception. The studies in science education spanned the period from 1981–1991, with 71% having been conducted in the last 5 years of the period; 80% originated within the United States. Most studies were conducted with high school students (30%) or undergraduates (29%), with 71% using a mixed population. As opposed to the studies in reading education, 75% of the science studies were rated medium or low in internal validity. Both groups of studies included interventions that attempted to elicit cognitive conflict, develop a sense of plausibility, and aid learners in applying new conceptions to solve problems. Nonrefutational text was found to be effective when combined with strategies that produced cognitive conflict. Augmented activation activities designed to cause incongruity with the preconception demonstrated large effects. The accumulated evidence from both disciplines indicated that instructional interventions designed to offend the intuitive conception were effective in promoting conceptual change. Conceptual and methodological problems in both areas are discussed.

VI. Reading of atypical learners

VI-1 Visually impaired

GRISHAM, J. DAVID; SHEPPARD, MELISSA M.; & TRAN, WENDY U. (1993, May). Visual symptoms and reading performance. *Optometry and Vision Science, 70*, 384–391.

Investigates the relation between visual symptoms and reading performance among subjects who have abnormal binocular findings and subjects whose visual status is normal. Subjects were 78 first- and second-year optometry students who were divided randomly into two groups. The NDRT was administered to all participants. Also, each subject was asked to complete a survey of 24 visual symptoms three times during the experiment: during an initial baseline, after the first hour, and after the second hour. Subjects in Group 1 received the NDRT initially and then read their own material to complete the first hour; the second hour was a relaxed social hour in which subjects refrained from any nearpoint activity. For Group 2, the NDRT and reading followed the social hour. Optometric examination records of all subjects were evaluated; eight subjects, identified as having a minimal binocular vision disorder, were matched randomly with a control group having normal optometric data. At all three time intervals, the three most frequently reported visual symptoms were fatigue, sleepiness, and tired eyes. During the reading phase of the study, the frequency of the symptoms increased somewhat. Generally, subjects reported increased symptoms after reading and decreased symptoms after relaxation. Group 2 had a significantly higher mean comprehension score on the NDRT than did Group 1. No statistically significant differences in reading performance were found between the deficient and normal binocular vision groups. However, the binocularly deficient group reported a higher level of symptoms after reading than did the control group.

HELLER, MORTON A. (1992, June). The effect of orientation on tactual Braille recognition: Optimal touching positions. *Perception & Psychophysics, 51*, 549–556.

Performs a series of five experiments to assess the generalizability of the effects of orientation on tactile pattern recognition and to identify factors that might ameliorate the damaging effects of slant. Subjects in the first four experiments were sighted undergraduate students; each experiment used between 36 and 84 subjects. In Experiment 1, subjects were asked to name the letter that corresponded to the Braille pattern they touched. The Braille characters were presented in lines tilted at various angles from the upright. Performance was lowered by tilt, with as little as 15° of slant lowering matching accuracy. In Experiment 2, it was ascertained that tilt lowered performance for tangible letters as much as for Braille; however, recognition was better for print letters than for Braille. In Experiment 3, subjects were exposed to Braille that was top-down inverted, left-right reversed, or rotated +180° from the upright. Performance was near that for normal Braille in the left-right reversal setting, but low for the +180° rotation group. Experiment 4 attempted to determine whether it was possible to further minimize the damaging effects of rotations on Braille. Subjects were exposed to left-right reversals, but this was done through manipulation of the location of the stimuli in space. Recognition of left-right reversed Braille was compared with that of Braille left-right reversed due to the location on the back of a panel and in the vertical plane. Braille recognition accuracy was higher with Braille located vertically. A fifth experiment was conducted with 8 early-blind and 8 late-blind subjects. Tilt lowered performance for blind subjects also, but the effect was not as great as for sighted subjects.

HJELMQUIST, E.; DAHLSTRAND, U.; & HEDELIN, L. (1992, December). Visually impaired persons' comprehension of text presented with speech synthesis. *Journal of Visual Impairment & Blindness, 86*, 426–428.

Investigates the ability of visually impaired persons to remember and understand texts presented with speech synthesis and natural speech, respectively. Three groups of 16 visually impaired adults were paid participants in the research. Subjects in Group 1 (old) were ages 65–80 and inexperienced in synthetic speech; subjects in Group 2 were ages 35–55 and inexperienced in synthetic speech. Group 3 consisted of individuals who were ages 35–55 and experienced in synthetic speech. Two control texts and four test texts, all about 215 words long, were prepared for a speech synthesizer that was connected to a computer, and then the texts were tape-recorded using a natural speech condition. Subjects were assigned to several different conditions randomly within each sample. A recall test and a 12-question test were administered either immediately after presentation or 2 weeks later. All groups demonstrated better retention for text that was presented with natural speech than for the same material with synthetic speech. Only marginal effects were found as a function of age. The old, inexperienced group preferred the slowest presentation of speed of the three groups.

MOUSTY, PHILIPPE, & BERTELSON, PAUL. (1992, April). Finger movements in Braille reading: The effect of local ambiguity. *Cognition, 43*, 67–84.

Records the hand movements of blind readers as they read sentences that contain temporary local ambiguities and are designed to induce garden-path effects on disambiguation. Subjects were eight blind Braille readers, all native speakers of French and highly skilled readers. In the sentences, syntactically ambiguous beginnings were compatible with attachment of the prepositional phrase to the verb or the noun, but content of the prepositional phrase was inconsistent with verb phrase attachment in noun-phrase attachment sentences, not in verb-phrase attachment sentences. Mean total scanning time per character increased in the prepositional phrase region of noun-phrase attachment sentences, not of verb-phrase attachment sentences. However, the effect depended on both the content of the prepositional phrase and its predictability and was significant by items only when both factors favored verb-phrase attachment. Slowing down over the prepositional phrase was due to increased incidence of regressions to that region, and first-pass scanning speed was unaffected by sentence type.

WATSON, G.R.; WRIGHT, V.; DE L'AUNE, W. (1992, January). The efficacy of comprehension training and reading practice for print readers with macular loss. *Journal of Visual Impairment & Blindness, 86*, 37–43.

Seeks to study the relation between the visual skills used in reading and the ability to comprehend text by individuals with macular loss. In addition, instructional strategies for teaching comprehension to these individuals were studied. Participants were 38 adults who had sustained macular loss and were administered as pretest measures the reading rate subtest of the SDRT and the passage comprehension subtest of the WRMT. Subjects also were screened with the Pepper Visual Skills for Reading Test (VSRT), a measure designed to assess the reading performance of individuals with macular loss; those who received an accuracy score of 90% or better were included in the study. Subjects were placed randomly into one of three groups: control, practice, and treatment. The latter group received biweekly planned lessons in the use of cloze and other comprehension strategies. Following the completion of five sessions over a 10-week period for the practice and treatment groups, all subjects were retested with alternate forms of the Pepper VSRT, the SDRT, and the WRMT. Correlation coefficients between scores on the WRMT and the VSRT were not significantly related. The treatment group's improvement in reading comprehension scores was significantly greater than that of the control group. Improvement of reading rate for both practice and treatment groups significantly exceeded that of the control group. It was noted that the restoration of visual skills did not necessarily restore comprehension and that instruction in comprehension should become a part of the rehabilitation procedures for this population.

WHITTAKER, STEPHEN G., & LOVIE-KITCHIN, JAN. (1993, January). Visual requirements for reading. *Optometry and Vision Science*, *70*, 54–65.

Reviews research on the visual psychophysics of reading and applies the findings to low-vision assessment. It was determined that reading rate rather than reading comprehension was more sensitive to variations in a subject's visual functioning or the stimulus properties of print. Four different visual factors that significantly affect reading rate were identified: (1) acuity reserve, or print size relative to acuity threshold, (2) contrast reserve, or print contrast relative to contrast threshold, (3) field of view, or number of letters visible, and (4) central scotoma size in cases of maculopathy. Attainment of fluent reading levels requires that print size and contrast be several times threshold, and the diameter of a central scotoma should be less than 22°. The authors used the research to derive specific visual requirements for different reading rates. It is noted that when a visual impairment has been characterized, devices or interventions may be tailored to the individual's needs and capabilities.

VI-2 Hearing impaired

ROTTENBERG, CLAIRE J., & SEARFOSS, LYNDON W. (1992). Becoming literate in a preschool class: Literacy development of hearing impaired children. *Journal of Reading Behavior*, *24*, 463–479.

Conducts a qualitative investigation into the emergent literacy of preschool hearing-impaired children. Participants were seven children who were enrolled in two preschool hearing-impaired classes: a total communication group in the morning and an oral group in the afternoon. The same teacher taught both classes. Children ranged in age from 3-4 to 4-11. Data were collected over a 9-month period, with each class being observed for 5 hours per week for a total of 283 hours. Detailed descriptive and interpretive field notes were taken on observations of children in the school setting. Included were descriptions of children's verbalizations (oral and sign) and nonverbal communications, interactions with adults and peers, and participation in daily school activities. Samples of children's drawing and writing were collected; interviews were conducted with the teacher and aide as well as with some of the parents. Data were analyzed inductively. It was concluded that the children found a way to learn about the hearing world through literacy and used literacy for entry into the hearing world. Literacy was used in three ways: (1) as a primary form of communication, (2) as an interactional tool, and (3) to make sense of the world. Descriptions and examples of each use are provided.

HAYES, PAM, & ARNOLD, PAUL (1992, September). Is hearing-impaired children's reading delayed or different? *Journal of Research in Reading, 15*, 104–116.

Compares the reading of hearing-impaired and normally-hearing children on three measures. Subjects were 15 hearing-impaired children, ages 9-0 to 15-5, and 15 normally-hearing controls, ages 8 to almost 9. Several measures were administered including the Southgate Reading Test, the NARA, the Test for the Reception of Grammar (TROG), a free-response word association test, and a cloze test. The latter two measures were used to compare syntagmatic and paradigmatic responses. The hearing-impaired group tended to score lower on all measures than did the controls. Results also are compared with findings from an earlier study with hearing-impaired children. The authors feel that using the norms available for hearing children can be useful because the scores can illuminate problems that deaf children may have. On the cloze task, the hearing-impaired children made more errors on active sentences than on passive sentences, but the differences were not significant. No significant coefficient of correlation was noted between total cloze errors and Southgate association errors or between cloze errors and comprehension scores on the NARA. A coefficient of .70 was found between total errors on the cloze and TROG errors. It was concluded that hearing-impaired children's reading is delayed in some respects but that it is not different from that of normally-hearing children.

LIMBRICK, E.A.; MCNAUGHTON, S.; & CLAY, M.M. (1992, October). Time engaged in reading: A critical factor in reading achievement. *American Annals of the Deaf, 137*, 309–314.

Views the amount of time deaf children spend reading and the types of teacher interactions they have during reading instruction. The sample consisted of 45 severely and profoundly deaf children, ages 5–10, enrolled in 10 classrooms in a school for the deaf or in resource classrooms of a primary school in New Zealand. Data collected included teacher questionnaires and video recordings taken during reading instruction periods. Videotapes were analyzed for teacher interactions with children and the percentage of time each child engaged in reading or reading-related activities. Each child was observed for 45 seconds, and the interactions were recorded. The groups of children were divided into high- and low-progress subjects within each age group, based on a median split of scores on the GMRT. Mean time allocated to reading was 52.2 minutes per day, but the mean time actually devoted to reading instruction was 39.89 minutes per lesson. Time engaged in actual reading varied markedly across classrooms, with one senior class spending 80% of the actual time in reading, while one junior class spent less than 20% of the time in reading. High progress readers spent considerably more time reading than did low progress readers. Most teacher interactions involved giving instructions, discussing the texts, or listening to children's contributions. Teachers of younger children spent more time instructing than did teachers of older children. Teachers were more likely to model correct language and immediately supply a word than to alert children to meaning cues from the text. Feedback to children tended to be positive. Variability occurred also in the mode of communication the teacher used. In junior classes, three teachers used simultaneous signs and oral language most of the time, while another used mainly oral language with key signs. In senior classes, teachers varied even more, with one using no simultaneous language and another using signs and oral language 75% of the time.

Strassman, Barbara K. (1992, October). Deaf adolescents' metacognitive knowledge about school-related reading. *American Annals of the Deaf, 137*, 326–330.

Attempts to ascertain the metacognitive knowledge about school-related reading possessed by deaf adolescents. Data were collected via individual videotaped interviews with 29 prelingually deaf students, ranging in age from 14-7 to 19-5. The results of the 19-question interview indicated that students tended to be passive readers who used skill-based or school-task oriented schemata for reading.

Wathum-Ocama, John C. (1992, December). A survey of the appropriateness of instructional language materials used with deaf students. *American Annals of the Deaf, 137*, 420–424.

Undertakes a questionnaire survey to obtain information about instructional language materials used by educators in programs for deaf and hard of hearing students. A total of 141 questionnaires were mailed to teachers of deaf and hard of hearing students, speech-language pathologists who worked with such students, and special education directors; 68 usable questionnaires served as the basis for the report. About half of the materials used were not developed for use with deaf students; 67% of respondents indicated that finding age- and interest-appropriate materials was a problem. Dissatisfaction with current language materials was given as one reason many teachers made their own materials.

Arnold, Paul, & Mason, Julie. (1992, Spring). Reading abilities and speech intelligibility of integrated hearing-impaired children. *Educational Research, 34*, 67–71.

Administers a reading test to a sample of hearing-impaired pupils and an age-matched hearing control group and compares their scores with one another and with published norms. Subjects included 14 hearing-impaired pupils, ages 7–15, and a group of hearing controls matched for age and socioeconomic status. Hearing-impaired children were in a British school district with a policy of using an oral method of teaching in which residual hearing is optimized by the use of hearing aids and by early educational intervention. There is no use of sign systems or special schools for the hearing-impaired. The New Macmillan Reading Analysis was administered along with the RPM. Speech intelligibility of hearing-impaired pupils was rated on a 5-point scale. ANOVA procedures indicated no difference between the two groups for accuracy, but the normal hearing group was significantly superior in comprehension. Reading scores were not significantly correlated with the scores on the RPM. Both groups fell below the published norms on the reading measure.

Schaper, Maike W., & Reitsma, Pieter. (1993, March). The use of speech-based recoding in reading by prelingually deaf children. *American Annals of the Deaf, 138*, 46–54.

Presents two experiments with prelingually deaf school children investigating (1) strategies used in learning printed words and (2) the functioning of speech-based coding in a task that requires sequential memory for words. Subjects were 78 children from a Dutch primary school for the deaf. Children were formed into three subgroups based on the number of years in primary school: 1–2, 3–5, and 6–7 years. All had been instructed in vocalizing written language and were able to use spelling to sound correspondence rules. In Experiment 1, two sets of four pseudowords were constructed for each of two conditions, visual (V) and articulatory (A). Words within the A condition differed minimally with respect to articulatory movements and positions; in the V condition, words differed in terms of articulation, but had much in common visually. Children were asked to memorize the words, introduced as the names of different animals, and to pair the words to four different classes of animals. The number of trials needed to learn the association of sets of animal-word pairs was determined. Retention was determined one day later by the number of trials needed for relearning. All subgroups had more difficulty in learning the V sets, but the difference between A and V was not statistically significant for the oldest group. Almost all children (87%) from the youngest group relied on a visual approach in learning words, while 28% of the middle group and 50% of the oldest group used a speech-based strategy. In the second experiment, the same children and the same pseudowords were used, but this time subjects had to write the words in the order in which they were presented. In general, the results of the studies are interpreted as revealing a developmental change in the use of coding strategies. Prior to age 9, most children appear to process written words by means of visual codes; older children tended to differentiate and appeared to prefer either a visual or a speech-based strategy. The speech-based strategy was associated with better performance in reading tasks.

EWOLDT, CAROLYN; ISRAELITE, NEITA; & DODDS, RON. (1992, October). The ability of deaf students to understand text: A comparison of the perceptions of teachers and students. *American Annals of the Deaf, 137*, 351–361.

Investigates the metacognitive strategies and comprehension monitoring of deaf high school students using qualitative methods. Teachers' and students' perceptions of student performance were compared. Participants were eight boys and eight girls, ages 13–17, from a large residential day school for the deaf and nine teachers, two of whom were deaf. Students were videotaped as they read one short text per day for three days and then were asked questions related to how they understood each text, aspects that posed problems, strategies they used to understand the text, strategies good readers would recommend, and strategies their teachers would recommend. In addition, they were asked to retell each text. Based on their retelling scores, students were classified into two groups: high scorers and low scorers. Students were then asked to reread each text. Low scorers reread each text paired with their own retellings, commented on their retellings, and indicated whether the rereading improved their comprehension. High scorers reread the three texts and a representative low-scoring retelling; they were then asked to comment on the retelling and to suggest strategies to help their peer better understand the text. Teachers read the three texts and were asked to identify strategies they would recommend to help deaf students understand each one. They also rated the texts for interest and difficulty. All readers showed evidence of having self-monitored and of correctly assessing their own comprehension; 77% made assessments of difficulty that were consistent with their retelling scores. Teachers underestimated the extent to which their students could comprehend independently. The two groups agreed on which was the most difficult text but disagreed as to which was the most interesting.

DOWALIBY, FRED J. (1992, October). The effects of adjunct questions in prose for deaf and hearing students at different reading levels. *American Annals of the Deaf, 137*, 338–344.

Cites two studies that investigate interactions among adjunct question position, reading ability, and direct versus indirect learning outcomes for deaf postsecondary students and hearing middle school students. One study was conducted with 100 hearing middle school students, ages 14–17. Subjects for the other study were 74 students from the National Technical Institute for the Deaf, ages 19–26. Reading comprehension scores from the CAT were used to classify students as low-, medium-, or high-ability readers. Subjects read a text of approximately 1,150 words that was separated into 10 topical sections. Adjunct questions were inserted immediately preceding or following the sections of prose, with the two conditions and a no-question control condition randomly assigned to readers. Different effects were found for deaf and hearing subjects and for different levels of assessed reading ability.

For deaf subjects, both the pre- and postquestions resulted in almost identical repeated and related learning performances. In hearing subjects, the largest forward shaping effect was shown for middle-ability students. High-ability hearing readers showed comparable repeated learning with or without prequestions. Middle- and low-reading-ability hearing subjects performed better in the no-question control condition than in the post-question condition. Deaf students at all reading ability levels failed to demonstrate cognitive review effects.

LILLO-MARTIN, DIANE C.; HANSON, VICKI L.; & SMITH, SUZANNE, T. (1992, March). Deaf readers' comprehension of relative clause structures. *Applied Psycholinguistics, 13*, 13–30.

Examines and compares deaf good and poor readers' syntactic abilities. Subjects were 26 undergraduates at Gallaudet University who had severe to profound hearing loss and who were assigned to either the good or poor reader group on the basis of scores on the comprehension subtest of the GMRT. All were given a battery of five tests assessing comprehension of relative clauses (RCs) in written English (WE), signed English (SE), and American Sign Language (ASL): RC Reading, ASL Pictures, ASL Objects, SE Pictures, and SE Objects. Tests were administered by a deaf signer; the WE tests and the ASL tests were presented in separate blocks, with half the subjects receiving the ASL block first and half the English block first. Comprehension of WE sentences was assessed using the Relativization 1: Comprehension subtest of the Test of Syntactic Abilities (TSA), a standardized English test for deaf students. A total of 24 of the four-choice, multiple-choice items on the test were used. No indication was found of a relative clause syntactic deficit underlying the poorer reading ability of the poor reader group. Relative clause structures were comprehended equally well by both groups whether in WE, SE, or ASL. It was felt that the findings supported the hypothesis that a specific syntactic disability does not differentiate deaf good and poor readers but that a processing deficit may underlie the poor readers' comprehension difficulties.

GARTNER, FLORIA M.; TREHUB, SANDRA E.; & MACKAY-SOROKA, SHERRI. (1993, March). Word awareness in hearing-impaired children. *Applied Psycholinguistics, 14*, 61–73.

Tests word awareness skills in normal-hearing and hearing-impaired children and notes the ability of the two groups to provide definitions of *word*. Subjects ranged in age from 6 to 14 years and included 50 hearing-impaired (HI) and 39 normal-hearing (NH) children. School age participants were divided into younger and older subgroups. In individual audio- and videotaped interviews, children were asked a series of questions to probe their understanding of the concept *word*; they were asked to provide examples of various types of words (long, short, and difficult) and to make up a word and use it in a sentence. Findings indicated a pattern of age-related improvement in word awareness in HI and NH groups. Word-referent confusion was common in NH 4- to 6-years-olds and in HI children in general. NH children performed significantly better than HI children. HI children exhibited marked metalinguistic deficits, regardless of the degree of hearing loss. Bimodally HI educated children performed significantly less well than did orally educated children on the tasks.

VI-3 Mentally retarded

CONNERS, FRANCES A. (1992, June). Reading instruction for students with moderate mental retardation: Review and analysis of research. *American Journal on Mental Retardation, 96*, 577–597.

Reviews three areas of research on reading instruction for children with mild mental retardation: sight-word instruction, word-analysis instruction, and oral reading error-correction. The three sight-word techniques studied most were delay, picture fading, and picture integration. Research in each of those categories is reviewed. Studies dealing with word-analysis skills training tended to provide support that such instruction is a viable option for children with mild mental retardation. Word analysis was identified as a more effective means of oral reading error correction than word supply. The author cautions that the research base has few studies and that these often are based on small samples; also, some studies used designs that did not preclude alternative explanations.

BARBETTA, PATRICIA M.; HEWARD, WILLIAM; & BRADLEY, DONNA M.C. (1993, Spring). Relative effects of whole-word and phonetic-prompt error correction on the acquisition and maintenance of sight words by students with developmental disabilities. *Journal of Applied Behavior Analysis, 26*, 99–110.

Compares the effectiveness of two procedures for correcting errors during sight word drills for five pupils, ages 8–9, who were enrolled in a self-contained class for children with developmental disabilities. Full-scale Stanford-Binet IQs ranged from 58 to 76. Based on the WRAT-R Reading, two children scored at primer level, and three scored at first-reader level. Instruction occurred 3–5 days per week for 10–12 minutes in a one-on-one instructional setting. Each subject received an individualized set of 14 unknown words, with each week's new set divided randomly into halves. Errors during instruction were followed immediately by whole-word correction or phonetic-prompt correction. During the instruction period all five pupils correctly read a greater proportion of whole-word corrected words than of phonetic-prompt corrected words. Results of same-day tests were similar.

BARBETTA, PATRICIA M.; HERON, TIMOTHY E.; & HEWARD, WILLIAM. (1993, Spring). Effects of active student response during error correction on the acquisition, maintenance, and generalization of sight words by students with developmental disabilities. *Journal of Applied Behavior Analysis, 26*, 111–119.

Compares the effectiveness of active student-response error correction and no-response error correction during sight word instruction for six children with developmental disabilities. The six were aged 8–9 years and were enrolled in a primary self-contained class for children with developmental disabilities; each child was mainstreamed for part of the day. Full-scale IQs ranged from 58 to 76; results of the Brigance Inventory of Basic Skills given prior to the study indicated that three of the pupils were at the preprimer level, two were at the first grade level, and one was at the second grade level. One-on-one instruction was given 4 days a week for the 8 weeks of the study. One set of 20 unknown words was presented each week. Each set of 20 words was divided randomly into two equal groups. Pupil errors on one group of words were followed by the teacher modeling the word and the child repeating it (active student-response instruction); errors on the other group of words were followed by the teacher modeling the word while the pupil looked at the word card (no-response instruction). The active response procedure resulted in more words read correctly during instruction, same-day tests, next-day tests, 2-week maintenance tests, and sentences.

CUVO, ANTHONY J., & KLATT, KEVIN P. (1992, Summer). Effects of community-based, videotape, and flash card instruction of community-referenced sight words on students with mental retardation. *Journal of Applied Behavior Analysis, 25*, 499–512.

Compares three approaches to teaching community-referenced sight words and phrases to adolescents with mild and moderate retardation. Participants were six adolescents, ages 13-0 to 17-10, attending segregated special education classes in junior high schools. WISC-R or Stanford Binet IQs ranged from 45 to 65. Materials consisted of 30 informational, warning, and safety signs. Words and phrases were presented on flash cards in a school setting, on videotape recordings in a school setting, and on naturally occurring signs in the community. Nine words were taught to each of two groups of three boys, three in each of the three experimental conditions. Signs were learned in six or fewer sessions with a minimal number of errors. They were tested at the community sites. Findings indicated rapid acquisition of the words and phrases in all three training conditions and generalization from the flash card and videotape conditions to the community sites.

LAMM, O., & EPSTEIN, R. (1992, May). Are specific reading and writing difficulties causally connected with developmental spatial inability? Evidence from two cases of developmental agnosia and apraxia. *Neuropsychologia, 30,* 459–469.

Presents two case studies of Israelis suffering from severe developmental constructional apraxia. One subject was a 16-year-old male in the 11th grade. He was referred to a clinic because of unusual slowness in preparing homework. He was administered the WISC-R and the Gordon and Harness battery for spatial and serial skills; reading was assessed by reading passages of text, and writing, by dictation. Reading was fluent and free of mistakes. The second subject was a 10-year-old girl in fifth grade who was referred because of severe learning difficulties in basic geometry, although other school achievements were excellent. She frequently copied geometric figures in mirror-image fashion. Both subjects demonstrated normal to high ability in reading, writing, and arithmetic. Both showed a severe impairment of spatial and perceptual functions. It was concluded that severe spatial inability accompanied by developmental visual agnosia need not in itself be a cause of a reading difficulty.

COSSU, G.; ROSSINI, R.; & MARSHALL J.C. (1993, February). When reading is acquired but phonemic awareness is not: A study of literacy in Down's syndrome. *Cognition,* 46, 129–138.

Studies whether reading can be acquired in the absence of ability to perform explicit segmental tasks. Two experiments are presented, each with the same group of 10 Italian children with Down's syndrome, ages 8 to 15-8. Down's syndrome children were matched for reading ability with a group of 10 chronologically younger children. In Experiment 1 children read orally 30 regular Italian words and 30 words with irregular stress on the antepenultimate syllable. ANOVA results showed no effect of group. Both samples then read a group of 40 words and 40 nonwords. Both groups were close to ceiling on reading regular words but neither group showed a ceiling effect on irregular words or on nonwords. In Experiment 2, the groups were asked to perform four tasks assessing phonological awareness, segmentation, spelling, and blending. Down's syndrome children were significantly poorer than controls on all four tasks.

VI-4 Neurologically impaired/brain damaged

BEHRMANN, M.; & BUB, D. (1992). Surface dyslexia and dysgraphia: Dual routes, single lexicon. *Cognitive Neuropsychology, 9,* 209–251.

Presents a case study of a surface dyslexic, a 67-year-old right-handed female who, as the result of an auto accident, was left with a severe and lasting impairment to both her spoken and written language. The patient was presented with a series of tasks, including reading and writing of regular and irregular words. She demonstrated a dissociation between lexical and nonlexical pronunciation of written words. Performance on irregular words varied as a function of their frequency. Evidence was provided that the locus of the subject's deficit arose at the level of the representations in a single orthographic lexicon that subserves both reading and writing. Thus the patient showed a variance of the surface dyslexia and dysgraphia syndrome not covered by most current models.

DE PARTZ, MARIE-PIERRE; SERON, XAVIER; & VAN DER LINDEN, MARTIAL. (1992). Re-education of a surface dysgraphia with a visual imagery strategy. *Cognitive Neuropsychology, 9*, 369–401.

Documents the re-education of brain-damaged patient with surface dysgraphia. The patient was a 24-year-old male whose neurological examination revealed a right hemiparesis and a mild right hemispatial neglect without hemianopia. He suffered from dysgraphia as a result of impairments of the lexical procedure of writing arising from a deficit located in the orthographic output lexicon. A residual impairment in reading was located at two levels: at the visual input lexicon and at the semantic level. In the first stage of a two-stage therapeutic program, the patient was retaught some irregular and ambiguous words by means of a visual imagery technique. In post-therapy, a selective training effect was observed with imagery strategy. The words trained with the visual-imagery strategy improved significantly in comparison with untrained words and with words trained using the more common technique of repetitive presentation of the ambiguous and irregular spellings. It is concluded that the findings support cognitive-oriented therapeutic approaches.

FRIEDMAN, RHONDA B., & HADLEY, JEFFREY A. (1992). Letter-by-letter surface alexia. *Cognitive Neuropsychology, 9*, 185–208.

Documents the reading and spelling patterns of a patient who developed letter-by-letter reading and the symptoms of surface alexia after a left-hemisphere infarct in the territory of the posterior cerebral artery. The patient, a 62-year-old left-handed male, was left with a reading disorder following a left-hemisphere stroke. He complained of a problem reading long words and reported that he decoded letter-by-letter. He was administered the Boston Diagnostic Aphasia Exam and performed normally on all subtests except for some of the reading and writing subtests. He was presented with a series of various word lists to read orally: abstract and concrete words, parts of speech, affixed words, pseudowords, spelling-to-sound regular and irregular words, homophonic words, and a speeded reading test with words of varying length. In addition, he was shown three types of letter strings presented tachistoscopically: pseudowords, orthographically illegal unrelated letter strings, and real words. The patient's spelling ability was tested by means of three lists of words, and he was asked also to name a word that was spelled aloud at the rate of one letter per second. His pattern of reading contained none of the features of the phonological alexia/deep alexia continuum; there was no effect of concreteness, no effect of part of speech, and no relative disadvantage for affixed words. His reading disorder resembled that of letter-by-letter reading or pure alexia. Difficulty in reading long words was verified by the timed reading task. The patient's reading also met many of the criteria for surface alexia. An account of this combination of alexias is discussed based on a model that posits one shared orthographic lexicon.

HERMANN, BRUCE P.; SIDENBERG, MICHAEL; HALTINER, ALLAN; & WYLER, ALLEN R. (1992, September). Adequacy of language function and verbal memory performance in unilateral temporal lobe epilepsy. *Cortex, 28*, 423–433.

Compares patients with unilateral left and right temporal lobe epilepsy on a standardized aphasia battery in order to determine the impact of the disorder on their language functioning. In addition, the influence of nominal speech on verbal learning and memory ability is examined, and laterality of temporal lobe epilepsy and adequacy of language functions are compared to note their relative effects on verbal learning and memory ability. Subjects were 99 nonretarded, left-hemisphere dominant patients over age 16 with intractable idiopathic epilepsy of left or right medial temporal lobe origin; 47 had ictal onset from the left (dominant) temporal lobe, and 52 had ictal onset from the right (nondominant) temporal lobe. The Multilingual Aphasia Examination (MAE) was used to assess language functions. Subjects also were administered the California Verbal Learning Test (CVLT). Six factors with the highest loading CVLT index were selected and used as the dependent variables in evaluation of language and memory relations. Patients with left temporal lobe epilepsy scored significantly lower than the right temporal lobe epilepsy group on the following aphasia battery subtests: visual naming, sentence repetition, token test, reading comprehension, and aural comprehension. The authors concluded that there is a significant relation between adequacy of language function and various aspects of verbal learning and memory ability in both left and right temporal lobe groups. In addition, it was felt that the adequacy of basic language functions was particularly compromised in left temporal lobe epilepsy.

KARNATH, HANS-OTTO, & HUBER, WALTER. (1992, June). Abnormal eye movement behaviour during text reading in neglect syndrome: A case study. *Neuropsychologia, 30*, 593–598.

Investigates eye movement behavior during reading by a patient who was suffering from a right basal ganglia infarction with a left-sided hemineglect but without any visual field defects. The patient was a 56-year-old male who showed signs of a left-sided visual hemineglect on a series of tasks. The patient was asked to read nine stories, each consisting of six sentences. Each sentence started at the beginning of a new line and continued into the succeeding one. Nine non–brain-damaged controls each were asked to read one of the nine texts. The main findings were abnormal return sweeps by the patient. The return sweeps of the patient ended in the middle of the next line, whereas in normal readers there was a long leftward saccade. The patient's return sweeps were followed by sequences of short saccades indicating silent backward reading until a linguistically plausible continuation of sentences from the previous line was found, irrespective of the actual beginning of text.

NICKELS, LYNDSEY. (1992). The autocue? Self-generated phonemic cues in the treatment of a disorder of reading and naming. *Cognitive Neuropsychology, 9*, 155–182.

Describes a therapy program designed to improve oral reading and spoken naming in a deep dyslexic patient through the teaching of grapheme-phoneme correspondences. The patient was a 43-year-old male who was admitted to a hospital following the sudden onset of aphasia and right-sided weakness. Following therapy, he showed some improvement, and conversation was somewhat more successful. An additional therapy program was set up and took place over a 10-week period with twice weekly sessions of 15–30 minutes. Significant improvement occurred in the ability to read words aloud as well as in spoken naming. However, the patient remained unable to read nonwords aloud, and his improvement in the ability to read real words primarily applied to high-imageability items. There was no evidence for a regularity effect in naming or reading. It was concluded that the therapy had permitted the patient to produce successfully the phoneme associated with the initial letter of the word, and this in turn acted as a phonemic cue to facilitate reading of that word. Spoken naming also was facilitated, as information on the form of the word similarly could be used to provide a phonemic cue for spoken production.

Seymour, Philip H.K., & Evans, Henryka M. (1992). Beginning reading without semantics: A cognitive study of hyperlexia. *Cognitive Neuropsychology, 9*, 89–122.

Follows the literacy development of one boy who was designated as hyperlexic. The boy showed a period of slow brain growth and delayed development in infancy. Walking and speaking did not occur until about age 2. He remained in nursery school for an additional year due to emotional immaturity, starting in primary school in England at age 6. The child had difficulty focusing on a task without frequent guidance and direction. He was not able to discuss situations portrayed in pictures or predict what might happen next. A home visitor noted that the boy wrote his name, identified numbers, and read some words promptly at age 5. Standardized test results in reading and spelling showed that he was ahead of his CA. The Neale test was administered at age 7 and again near age 9 and resulted in scores ahead of CA on accuracy but with comprehension impaired. Other children in his class were provided with the same program of instruction and were used as points of reference. In spite of impaired language production and comprehension, the boy developed an effective orthographic system, indexed by normal reaction-time patterns and success in reading words and nonwords Semantic processing of single lexical items appeared efficient also. The authors noted that the orthographic system may develop normally in the absence of a semantic level but that the inclusion of an alphabetic process might be expected to confer a significant advantage.

Smith, Martine M. (1992, March). Reading abilities of nonspeaking students: Two case studies. *Augmentative and Alternative Communication, 8*, 57–66.

Presents case studies of two nonspeaking cerebral palsy children and examines their performance in reading and other areas. The first subject was a girl who was between ages 7 and 8 during the assessment period. She lived in a rural village in Ireland and attended her neighborhood school. The second subject was a boy of similar age to the first subject who lived in a residential area in Dublin, Ireland. The following areas were assessed: receptive language, including vocabulary; expressive language and communication; visual perceptual abilities; and auditory perceptual abilities, including auditory memory, discrimination, and synthesis. Both children scored within normal limits on the Test of Auditory Comprehension of Language (TACL), while the girl scored only marginally outside the limits on the British Picture Vocabulary Scales (BPVS). On the Carrow Auditory Visual Abilities Test (CAVAT), both children scored almost three standard deviations below norms on visual and auditory memory tasks. On the SPAR Group Reading Test, the two achieved reading quotients within the average range. Apart from differences in their speech production ability, the two performance profiles were quite similar.

VI-5 Other atypical learners

Barone, Diane. (1993, February). Wednesday's child: Literacy development of children prenatally exposed to crack or cocaine. *Research in the Teaching of English, 27*, 7–45.

Reports observations gleaned during the first year of a 6-year longitudinal study of the literacy development in children who were prenatally exposed to crack or cocaine. Subjects were 17 boys and 9 girls, ranging in age from 18 months to 7 years, with 16 of the children ages 3–4 years. Subjects were in relatively stable home placements, with six in adoptive homes and the remainder in foster care. Two literacy activities, drawing and storytelling, were observed, and children's knowledge of literacy concepts was explored. Following initial interviews with parents, children were observed in the home and then in a preschool or elementary classroom on a monthly basis. Children ages 18 months through 4 years appeared to be similar to other preschool children in literacy development. Parents indicated that the children liked to have books read to them, particularly at bedtime. Of the 3- and 4-year-olds, 12 were in preschool. Great diversity was found in their drawings; all the children in this age group distinguished writing from drawing. Several of these children could write their names and one or two other words. Generally, children in this age group enjoyed being read to. At the end of the year's observation, the preschoolers in the study were developing as readers and writers. Of the four children who were in kindergarten, three were in special at-risk kindergartens. Three of the four were considered beginning readers. The oldest child in the study was in second grade and received resource room help. His literacy development was described as progressing in an age-appropriate fashion.

LIGHT, JANICE, & MCNAUGHTON, DAVID. (1993, February). Literacy and augmentative and alternative communication (AAC): The expectations and priorities of parents and teachers. *Topics in Language Disorders, 13*, 33–46.

Provides an overview of the research on literacy expectations for students without disabilities and then reviews the research on expectations and priorities for students who use augmentative and alternative communication systems. The article ends with educational and clinical implications from the research for such students and also addresses directions for future research.

Journals Monitored
Annual Summary of Investigations Relating to Reading
July 1, 1992 to June 30, 1993

Action in Teacher Education
Adolescence
Adult Education Quarterly
Adult Learning
Alberta Journal of Education Research
American Annals of the Deaf
American Educational Research Journal
American Journal of Community Psychology
American Journal of Education
American Journal of Orthopsychiatry
American Journal of Psychology
American Journal of Sociology
American Journal on Mental Retardation
American Quarterly
American Sociological Review
Applied Psycholinguistics
Archives of Neurology
Arithmetic Teacher
Arizona Reading Journal
Arkansas State Reading Council
Australia & New Zealand Journal of Developmental Disabilities
Australian Journal of Education
Australian Journal of Psychology
Australian Journal of Reading
Australian Library Journal
Brain & Cognition
Brain & Language
Brain: A Journal of Neurology
British Journal of Educational Psychology
British Journal of Educational Studies
British Journal of Educational Technology
British Journal of Psychology
British Journal of Sociology of Education
British Journal of Special Education
Bulletin of the Psychonomic Society
California Reader
Canadian and International Education
Canadian Journal of Psychology
Canadian Library Journal
Canadian Modern Language Review
Canadian Psychology
Cartographic Journal
Child Development
Child Psychiatry and Human Development
Childhood Education
Children's Literature in Education
Clearing House, The
Cognition and Instruction
Cognition International Journal of Cognitive Science
Cognitive Neuropsychology
Cognitive Psychology
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College Student Journal
Communication and Cognition
Communication Education
Communication Monographs
Communication Quarterly
Communication Research
Comparative Education Review
Computing Teacher
Contemporary Education
Contemporary Educational Psychology
Contemporary Issues in Reading
Contemporary Psychology
Cortex
Council Chronicle
CSIL: Current Studies in Librarianship
Curriculum Inquiry
Developmental Medicine and Child Neurology
Developmental Psychology
Discourse Processes
Early Childhood Research Quarterly
Education
Education and Society
Education and Training in Mental Retardation
Education for Information
Education Libraries Journal
Education, USA
Educational and Psychological Measurement
Educational Gerontology: An International Quarterly
Educational Horizons
Educational Leadership
Educational Psychologist
Educational Psychology
Educational Research
Educational Research Quarterly
Educational Researcher
Educational Review
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English for Specific Purposes
English in Australia
English in Education
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Exceptional Children
Florida Reading Quarterly
Foreign Language Annals
Forum
Forum for Reading
Gazette: International Journal of Mass Communications Studies
Georgia Journal of Reading
Gifted Child Quarterly
Harvard Educational Review
High School Journal
History of Education Quarterly
Human Communication Research
Human Development
Human Factors
Idaho Reading Report
Illinois Reading Council Journal
Imagination, Cognition, & Personality
Imprint
Indian Educational Review
Indiana Media Journal
Indiana Reading Quarterly
Instructional Science
Interchange
International Journal of Disability, Development, & Education
International Journal of Educational Research
International Library Review
International Research in Reading
International Review of Education
Interracial Books for Children
Intervention in School and Clinic
Iowa Reading Journal
Irish Journal of Education
Journal for Affective Reading Education
Journal of Abnormal Child Psychology
Journal of Advertising
Journal of Advertising Research
Journal of Aesthetic Education
Journal of American Optometric Association
Journal of Applied Behavior Analysis
Journal of Applied Behavioral Science
Journal of Applied Developmental Psychology
Journal of Child Psychology and Psychiatry
Journal of Classroom Interaction
Journal of Clinical Psychology
Journal of Clinical Reading: Research and Programs
Journal of College Reading & Learning
Journal of Communication
Journal of Communication Disorders
Journal of Counseling Psychology
Journal of Curriculum Studies
Journal of Education
Journal of Educational Computing Research
Journal of Educational Measurement
Journal of Educational Psychology (USA)
Journal of Educational Psychology (W. Germany)
Journal of Educational Research
Journal of Experimental Child Psychology
Journal of Experimental Education
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of General Psychology
Journal of Genetic Psychology
Journal of Learning Disabilities
Journal of Marketing
Journal of Marketing Research
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Journal of Mental Imagery
Journal of Multilingual and Multicultural Development
Journal of Negro Education
Journal of Psychoeducational Assessment
Journal of Psycholinguistic Research
Journal of Reading
Journal of Reading Behavior
Journal of Reading Education
Journal of Reading, Writing, and Learning Disabilities International
Journal of Research and Development in Education
Journal of Research in Childhood Education
Journal of Research in Personality
Journal of Research in Reading
Journal of Research in Science Teaching
Journal of Research on Computing in Education
Journal of School Psychology
Journal of Special Education
Journal of Speech and Hearing Disorders
Journal of Speech and Hearing Research
Journal of the Acoustical Society of America
Journal of Visual Impairment and Blindness
Journalism Monographs
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Kansas Journal of Reading
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Kentucky Reading Journal
Language and Speech
Language Arts
Language in Society
Language Learning
Learning Disabilities Quarterly
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Library and Information Science Research
Library Association Record
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Library Quarterly
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Linguistics: An Interdisciplinary Journal of the Language Sciences
Literacy: Issues and Practices
Mass Communications Review
Massachusetts Primer
Measurement and Evaluation in Counseling and Development
Memory and Cognition
Merrill-Palmer Quarterly
Michigan Reading Journal
Minnesota Reading Association Highlights
Mississippi Reading Journal
Missouri Reader
Modern Language Journal
Monographs in Language and Reading Studies
Monographs of the Society for Research in Child Development
Montana Reading Journal
Mosaic
National Association for Secondary School Principals Bulletin
Neuropsychologia
New England Journal of Medicine
New England Reading Association Journal
New Mexico Journal of Reading
New Zealand Journal of Educational Studies
News and Views
News Notes
News Research Report
Newspaper Research Journal
Ohio Reading Teacher
Oklahoma Reader, The
Optometry & Vision Science
Peabody Journal of Education
Perception and Psychophysics
Perceptual and Motor Skills
Perspectives
Perspectives in Education and Deafness
Phi Delta Kappan
Poetics
Poetics Today
Professional Psychology: Research and Practice
Programmed Learning and Educational Technology
Prospects: Quarterly Review of Education
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Psychological Record
Psychological Reports
Psychological Review
Psychology
Psychology in the Schools
Psychophysiology
Public Opinion Quarterly
Publishers' Weekly
Publishing Research Quarterly
Quarterly Journal of Experimental Psychology
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Reading Improvement
Reading in a Foreign Language
Reading in Virginia
Reading Instruction Journal
Reading Professor, The
Reading Psychology
Reading Research and Instruction
Reading Research Quarterly
Reading Teacher, The
Reading Today
Reading: Exploration & Discovery
Reflections
Reflections on Canadian Literacy
RELC Journal
Remedial and Special Education
Research and Teaching in Developmental Education
Research in Education
Research in Higher Education
Research in the Teaching of English
Research Papers in Education
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Review of Educational Research
Rhode Island Reading Review
Roeper Review
Scandinavian Journal of Educational Research
Scandinavian Public Library Quarterly
Scholarly Publishing
School Counselor
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School Psychology International
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School Psychology Review
School Science & Mathematics
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Science of Reading
Sex Roles
Social Education
Sociology of Education
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Southwest Minnesota Reading Council Newsletter
Spelling Progress Quarterly
Star of the North
Studies in Educational Evaluation
Studies in Second Language Acquisition
Support for Learning
System
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Teaching Exceptional Children
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Tennessee Teacher
TESOL Quarterly
Texas Reading Report
Texas Tech Journal of Education
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Attention and Performance: Proceedings of the International Symposium on Attention and Performance
Australian Reading Association Conference Proceedings
Claremont Reading Conference Yearbook
Literacy and Language in Asia Yearbook
National Reading Conference Yearbook
Proceedings of the Annual Conference of the Reading Association of Ireland
Proceedings of the Research Study Symposium (FRA)
Reading Education in Texas: A Yearbook of the Texas State Reading Association
Reading Research: Advances in Theory and Practice
Review of Research in Education (AREA)
State of Maryland Yearbook (IRA)
Teacher Education for Literacy Around the World
United Kingdom Reading Association Conference Proceedings
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Author Index, Annual Summary of Investigations Relating to Reading, July 1, 1992 to June 30, 1993

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